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AIR CONDITIONING AND REFRIGERATION News

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INSIDE DOPE

by GEORGE F. TAUBENECK

Gag of the Week
Story of the Week
Add Poker Stories
Add Speaker Stories
Add Kid Stories I
And Freely Flowed the Vodka
No Argument
Companion Piece:
Last Gasp:
Add Kid Stories II
They're Precocious Nowadays
How You Keep 'Em Down on the Farm
The Postman Always Dies Twice
Psychology
Are YOU Interested?
Creed for Business
Confusion Rampant
Wages and Salaries
The Nose and the Grindstone

Gag of the Week

Passengers on the New York City "rubberneck" sight-seeing bus were growing a trifle weary.

"You are now passing," intoned the barker, "the longest bar and the biggest saloon in the world."

Croaked a tired and thristy passenger:

"Why?"

Story of the Week

Russell S. Penn (Talbert-Thomas Co. of Michigan) tells this story about one of the Talbert-Thomas servicemen.

The latter was enjoying his first overnight train ride. He had an upper berth. When time came to retire, he eyed the upper thoughtfully, wondering how in the devil he could get up there. While he pondered the matter far into the night in the club car (over several beers) in his absence the porter arrived with a standard Pullman ladder, placed it in position against the serviceman's bunk, and went on his way.

Lurching back to his Pullman car after the beers had been cut off, the serviceman spied the ladder, climbed into his berth, pulled the ladder in after him, and went to sleep.

He was awakened the next morning by angry mutterings. Sticking his head out between the curtains, the serviceman spotted the muttering passenger—who was the occupant of an upper berth across the aisle.

"What's the trouble?" asked the serviceman.

"That dad-blasted porter can't find his ladder and I can't get down out of here until he does," bellowed the guy across the aisle.

"Just a minute, stranger," the helpful serviceman rejoined. "You can borrow my ladder soon as I can fish it out of here."

Add Poker Stories

Dawn was ready to bust out all over, and still the six marathon poker players automatically shuffled, dealt, chipped in, and withdrew.

All of a sudden one player keeled over and fell to the floor. He was dead.

"Jeepers," hoarsed one of the poker fiends. "What's our next move?"

Another player lit a fresh cigar and reshuffled the deck.

"Last time this happened," he said, "we took out the deuces and treys."

Add Speaker Stories

Chap we know quite well speaks at too many banquets for his own good. So many, in fact, that he's

(Concluded on Page 8, Column 1)

NEMA Freezer Sales Drop 29% In November

NEW YORK CITY—A 29% drop in the sale of farm and home freezers during November by 33 manufacturers reporting to the National Electrical Manufacturers Association was revealed recently in statistics released by Nema.

World sales by the group totaled only 27,589 units as compared with the 38,982 in October and the 45,733 in September. Only 123 units were sold by these manufacturers outside the boundaries of the United States during November.

Total sales for the 11 months of 1948 reached 429,703, of which 426,038 were sold in this country.

Gains for the month were reported in only three size classifications. The 13 to 16.9-cu. ft. group rose from 5,133 in October to 6,196 in November. The 21 to 29.9-cu. ft. category went from 149 to 185, and the 30 to 39.9-cu. ft. category moved up from 445 to 511.

Greatest losses were recorded in the 5 to 6.9-cu. ft. category, down from 7,409 in October to 3,179 in November; and the 11 to 12.9-cu. ft. category, down from 2,691 to 1,200.

The 7 to 8.9-cu. ft. category, in which about one third of the total sales were made in both months, dropped from 13,326 in October to 9,435 in November.

Carrier Makes New Console Conditioner

SYRACUSE, N. Y.—A completely new console type room air conditioner, backed by a five-year warranty and more efficient and marked by new cabinet styling, has been announced by Carrier Corp.

Designed in a two-tone, mar-resistant, brown finish, to blend with the interior decoration schemes of both offices and homes, the new unit —known as the 51H2 deluxe—is of 1-hp. capacity, for use in larger-than-average rooms. This unit replaces the ¾ hp. and 1½-hp. console models formerly in the Carrier line.

New features embodied in the new

(Concluded on Back Page, Column 1)

IN THIS ISSUE

The problem of securing properly refrigerated transportation for frozen foods has long vexed the industry. Here's an idea that solves the puzzle by eliminating the need for refrigerated vehicles, **page 6.**

* * *

What should the appliance dealer do—cooperate with plumbers and electricians or by-pass them? A NARDA panel discusses the problem on **page 10.**

* * *

Stories and pictures of new air conditioning products displayed at the ASHVE exposition in Chicago appear on **pages 14, 15, 16, 22, and 23.**

* * *

"No longer will the same old threadbare ideas bring customers into your store." What is needed for 1949 sales is outlined on **page 26.**

* * *

How the sales dollar of the typical commercial refrigerator dealer was divided in 1947 is analyzed in detail on **pages 28 and 29.**

* * *

No brine, cans, or labor are needed in the new continuous ice-making process described on **page 13.**

* * *

Departments: Editorial, **page 18.** . . . Key to Air Conditioning, **page 20.** . . . P. B. Reed, **page 35.** . . . What's New, **pages 24, 25.** . . . World Trade News, **page 30.**

Distribution of Mills Freezer Goes To Freez-King

CHICAGO—Freez-King Corp. has been named national distributor for the Mills ice cream freezer, according to a joint announcement made last week by Mills Industries, Inc., and Freez-King Corp.

This gives Freez-King Corp. a counter-type ice cream and frozen malt producing machine to merchandise along with its own continuous Freez-King machine which makes frozen custard and soft ice cream.

The Mills freezer, which has been on the market for a number of years and which is installed in a wide number of retail establishments and institutions, is made in two standard sizes, 2½ and 5-gal. models. The

(Concluded on Back Page, Column 3)

Attendance at ASHVE Meeting Sets Record

CHICAGO — A record-breaking final attendance figure of 2,500 was chalked up for the fifty-fifth annual meeting of the American Society of Heating and Ventilating Engineers held at the Stevens hotel here.

This meeting was held concurrently with the Ninth Annual Heating & Ventilating Exposition at the International Amphitheatre. Details of many of the displays and products

CHICAGO—The 1950 International Heating & Ventilating Exposition will be held in Dallas, Tex. Jan. 23-27, 1950, it has been announced by the International Exposition Co., which puts on the show.

on view at the show are published elsewhere in this issue of the NEWS. Reports of some of the technical papers presented at the ASHVE meeting will also be published.

Alfred E. Stacey, Jr., director of application engineering for Carrier Corp., took over the reins of ASHVE for 1949 at this meeting following his election as president of the society. He succeeds Prof. G. L. Tuve.

Other officers elected include Lester T. Avery as first vice president, L. E. Seeley as second vice president, and Ernest Szekely, treasurer. A. V. Hutchinson and Carl H. Flink continue as secretary and technical secretary, respectively. Cyril Tasker remains as research director.

Elected to the ASHVE council for three-year terms were S. W. Boyd, C. Rollins Gardner, J. Donald Kroeker, and C. O. Mackey.

Five men were elected to the committee on research for three years—I. W. Cotton, Nathaniel Glickman, W. A. Grant, L. N. Hunter, and R. D. Madison, while E. R. Queer will serve a two-year term.

House Committee Plans Probe Of Effects of Regulation W

* * *

NARDA Survey Shows Majority of Members Favor Credit Curbs

CHICAGO — Retention of Regulation W, with some amendments, appears to have the support of a majority of members of the National Appliance & Radio Dealers Association, according to early tabulations of a survey on the subject.

C. C. Simpson, managing director, said that although all results of the survey are not in, more than 50% of the retailers favor Regulation W as it stands or with some amendments to the time payment stipulations.

Many requests for amendment ask for 18 months in place of the specified 15-month payment period. An almost equal number requested 24-month terms.

Dealers asking for abolition of the regulation said they favored lower down payments and longer terms, in most instances. There were scattered requests for as high as one-third down payment and as short as 12

(Concluded on Back Page, Column 4)

Rep. Patman Says House Group Will Investigate Steel Allocations, Too

WASHINGTON, D. C. — Rep. Wright Patman (D., Texas), who was in line to become chairman of a Special House Committee on Small Business, said here last week that the effects of Regulation W and steel allocations are scheduled for early investigation by the group.

The committee was slated to be formally created by the House during the week. It would consist of nine members and would have the power to hold hearings, conduct investigations, and make reports and recommendations, but not to report legislation for House action.

In revealing the planned investigation of the effects of Regulation W, Rep. Patman referred to restrictions on automobile purchases. It was not immediately clear whether the probe would deal with major appliances.

The congressman, who has sharply criticized the Federal Reserve Board's administration of Regulation W, has asked that automobile purchasers be allowed 24 months, instead of 18, to pay off balances. He claims that the controls are adversely affecting automobile dealers' sales.

With regard to steel allocations, Rep. Patman said two small steel users who had been in business 50 and 75 years, respectively, told him they were forced to close their concerns because their allocations for steel were cut off. The steel suppliers then formed subsidiaries to replace the two companies, he declared.

(The bill to extend the program of voluntary allocations of steel and other scarce materials for seven months was passed by the Senate and House last week and sent to the White House.)

Remington Offers Air Cooling Models

CORTLAND, N. Y.—A greatly expanded line of room air conditioners for 1949 has been announced by Herbert L. Laube, president of Remington Air Conditioning, division of Remington Corp. here, with a total of 10 models forming what the manufacturer believes to be as complete a selection of room units as is currently on the market.

Included are both console and window-sill types ranging from ½ to 1¾ hp., air cooled and water-cooled units for a.c. or d.c., and remote installation units. The units

(Concluded on Page 33, Column 1)

Bill Would Hit Unfair Nebraska Dealer Ads

LINCOLN, Neb.—A bill aimed at unfair advertising by appliance dealers and other retailers in Nebraska has been introduced by Senator Charles F. Tvrdik of Omaha as LB-395 in the state legislature here recently.

It provides that it shall be considered deceptive and misleading advertising if, where sales are advertised at less than cost, the advertiser does not limit sale terms to quantity available or state that the advertiser is discontinuing the item.

Exhibits Planned For Builder's Show

CHICAGO—Several appliance firms will exhibit at the National Association of Home Builder's Annual Convention and Exposition Feb. 20-24 at the Stevens hotel here.

The exposition is held under the sponsorship of the National Association of Home Builders of the U. S., with headquarters at 111 W. Jackson Blvd., Chicago.

Kelvinator will exhibit its full line of refrigerators, home freezers, and electric ranges.

Hotpoint's exhibit of appliances will spotlight its new automatic electric dishwasher and a new 40-gal. table-top electric water heater.

The full line of General Electric appliances will be on display, and G-E will also feature its "Applianset"

(Concluded on Back Page, Column 5)

Tests Show Body Suffers No Ill Effects From Sudden Air Temperature Changes

By C. Dale Mericle

CHICAGO — Sudden changes of temperature in the air conditioning range, such as experienced when a person goes from a comfort-cooled space to the outdoors where the temperature may be nearly 100° F., do not have any harmful effect on the heart.

In fact, there is little difference in the way persons with heart disease and those with normal hearts react to a sudden change in temperature, it was declared in a paper presented at the fifty-fifth annual meeting of the American Society of Heating and Ventilating Engineers at the Stevens hotel here.

In a six-man study sponsored by ASHVE in cooperation with the University of Illinois' department of medicine, the authors of a paper entitled "Physiologic Adjustments of of Normal Subjects and Cardiac Patients to Sudden Change In Environment," said this finding was "in accord with general experience of the public that no ill effects are apparent to normal individuals making the adjustment required by entering and leaving an air conditioned space during the hot summer months."

"This paper," commented Charles Leopold, Philadelphia consulting engineer, "has put the scientific stamp on our daily working knowledge," and Lester T. Avery, Cleveland contractor, added, "I've always thought

(Concluded on Page 33, Column 1)

'Limited Quantity' Price Cut Announced by Easy

SYRACUSE, N. Y. — To speed clearances of dealer inventories and "stimulate fast buying action" before the announcement of new models, the Easy Washing Machine Corp. here has announced price reductions of from $10 to $30 on "limited quantities of certain models" of Easy home laundry products.

According to W. H. Reeve, vice president in charge of sales, "this promotional activity is being launched on a staggered basis in selected markets to stimulate retail movement. The new price schedule affects but limited factory and warehouse supplies."

Hotpoint Names Taylor Market Development Mgr.; J. E. Bogan Succeeds Him

CHICAGO — Edward R. Taylor, merchandising manager, Hotpoint, Inc., has been named manager of market development and John E. Bogan was appointed to fill the merchandising post, Leonard C. Truesdell, vice president of marketing, has announced.

Formerly the national sales consultant to the American Gas Association, Bogan has recently headed marketing for a midwest range manufacturer.

In his new position, Taylor will broaden and enlarge programs related to key dealers including department stores, furniture stores and electric utility companies. Before he came to Hotpoint as merchandising manager in 1947, he headed similar functions for a Chicago radio manufacturer.

Under Bogan, the merchandising department will continue its present functions of coordinating and directing programs for advertising, sales training, sales planning, sales promotion, and sales materials production.

Shreve Will Address EWI

WASHINGTON, D. C.—E. O. Shreve, president of the U. S. Chamber of Commerce will address the annual dinner meeting of the Electric Institute of Washington at the Mayflower hotel on Feb. 14, the institute has announced.

Amana Enters Household Refrigerator Field

Amana's recently introduced model FR-9 is a combination refrigerator-freezer with 9-cu. ft. capacity. Separate doors open into either 65-lb. capacity frozen food compartment or refrigerator section which has a capacity of over 7 cu. ft. Purchase includes a five-year warranty on refrigeration system.

West Penn Stops Range Warranty Service Plan by End of March

PITTSBURGH—The West Penn Power Co. here announced that it will discontinue its range warranty service plan as of March 31, 1949.

Pointing out to dealers that this will give them greater sales opportunities through servicing contracts, the company stated that, as of November, there were 48,000 electric ranges in its southwestern Pennsylvania territory.

Of this total, 36,000 ranges were out of warranty by the first of the new year, it added.

Talk on Ultraviolet Rays Set

DETROIT—Ultraviolet ray lamps and their uses will be discussed by Robert Bandfield of the Detroit Edison Co. in conjunction with the Ster-L-Ray Sales & Service Co. before the Greater Detroit Chapter of the Refrigeration Service Engineers Society at the Rackham building here Thursday, Feb. 10, at 7:30 p.m.

Davison Nets $617,000

BALTIMORE—For the six months ending Dec. 26, 1948, the Davison Chemical Corp. here has reported a net income of $617,000.

N. Y. Lawmakers Study Bill To Curb Finance Company Interest Rates, Terms

ALBANY, N. Y.—A bill intended to curb excessive interest rates and other abuses in the field of instalment selling has been introduced in the New York State Legislature by Senator J. Raymond McGovern, Westchester Republican.

Based on a two-year investigation by a special legislative committee headed by Sen. McGovern, the bill would affect finance company contracts involving sales up to $5,000 and would also regulate the conditions under which chattel mortgages could be negotiated, it is reported.

It would bring under regulation for the first time in New York State the interest charges of finance companies, which the committee's recent investigation disclosed had amounted in some cases to more than 500%.

The maximum interest allowable would be 1% a month on the unpaid balances.

The bill would impose heavy financial penalties for violation, ranging up to 72% of the value of the goods financed.

Under the measure's provisions, the printed portions of contracts would have to be in type of at least 8 point—the usual size of body type in newspapers—but some parts of contracts would have to be in even larger type. The contracts would have to contain an itemized statement of various charges.

The practice of some companies of charging for more insurance than the actual amount of premiums would be outlawed if the bill passes.

Finance companies further would be required to rebate to buyers the unused portion of both credit service charges and insurance premiums when contracts were paid up in advance.

The interest rate allowed by the bill would be equivalent to a 6% discount rate on an annual basis or an "effective" rate of between 11 and 12% a year.

Quarterly Sales, Net Earnings Rise at Nash-Kelvinator Corp.

DETROIT—Nash-Kelvinator Corp. reports net earnings after taxes for the first quarter of its fiscal year ended Dec. 31, 1948 of $5,859,289, amounting to $1.35 a share.

This compares with a net earnings of $5,640,974, or $1.30 a share after taxes, for the corresponding period of the previous fiscal year, according to the report.

Total sales of automobiles and electric refrigerators and other appliances amounted to $84,278,034 for the period as compared with $71,129,524 in the similar period of the preceding year.

Dept. Store Sales Up 9% During Jan. 8 Week

WASHINGTON, D. C.—Dollar sales of U. S. department stores for the week ending Jan. 8 were 9% higher than for the corresponding week last year, the Federal Reserve Board has reported.

All districts registered gains. The Boston district made the greatest gain—18%. New York had the least —1%.

For the four weeks ending Jan. 8, sales across the nation were up 10% over the corresponding period last year with the Boston and Chicago districts high with 12%. Lowest gain was 3% in the Minneapolis district.

Percentage gains by district for the week were as follows: Boston 18, New York 1, Philadelphia 6, Cleveland 13, Richmond 10, Atlanta 4, Chicago 14, St. Louis 9, Kansas City 9, Dallas 11, San Francisco 14.

G-E Appliance Dept. Sales Promotion Clinic Aims at Expanding Market

BRIDGEPORT, Conn.—The Appliance & Merchandise department of the General Electric Co. concluded on Jan. 10 an intensive five-day sales clinic on advertising, promotion, and merchandising for the sales promotion managers of its major appliance distributors.

More than 100 distributor sales executives heard headquarters advertising specialists and experts from Young & Rubicam, the department's agency.

The presentation, which took a month in planning, preparing, and rehearsing, covered in detail the department's cooperative advertising plan, scheduled campaigns and promotions, radio and television, advertising and promotion plans on the local level and headquarters advertising division organization and responsibilities.

The clinic was keynoted by C. R. Pritchard, department marketing manager, who predicted that all electrical appliances would be in free supply this year and warned that strenuous advertising and merchandising efforts will be necessary to compete in a buyer's market.

He estimated, nevertheless, that the combined demand for home freezers, dishwashers, and automatic washers—all new products—will exceed that for refrigerators in 1941; and that the demand for home laundry equipment, and for ranges and water heaters will be almost as great.

R. S. Peare, the company's advertising and publicity vice president; H. L. Andrews, vice president and general manager of the A & M department; and A. M. Sweeney, general sales manager of the department, were the principal speakers at the dinner meetings.

Chattanooga Freezer Volume Shows 46% Monthly Gain as Sales of Refrigerators Drop Off 7.5%

CHATTANOOGA, Tenn.—All major appliances except refrigerators and water heaters scored sales gains here during December, reports from local dealers to the Electric Power Board of Chattanooga have revealed.

Refrigerator sales were down 7½% from November and water heater sales were off 30%.

Dishwashers led the way in percentage gain over November with 88%. They were followed by garbage disposers at 75%, ironers at 58%, and home freezers at 46%. Other gains reported were clothes washers 13%, clothes dryers 12½%, vacuum cleaners 4%, and ranges 3%.

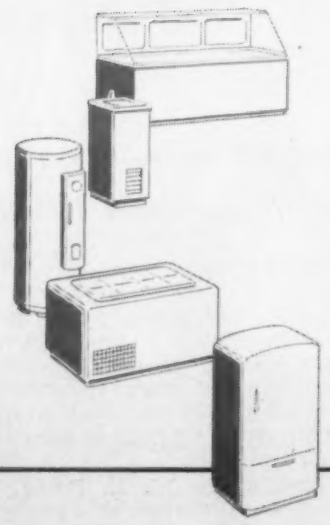
Comparisons with December, 1947 figures revealed that high volume appliances, including refrigerators, ranges, water heaters, and clothes washers, were selling in considerably greater numbers in 1947, while low volume appliances such as home freezers, clothes dryers, dishwashers, and garbage disposers were selling somewhat better in the 1948 month.

Exceptions were marked in vacuum cleaners whose sales in December, 1948 were three times those of the same month in 1947, and in ironers whose 1948 sales were far below the 1947 month.

The December 1948 report follows:

Appliance	No. of Units	Average Unit Price	Total Sales Value
Refrigerators, domestic	239	$ 281.93	$67,381.27
Home Freezers	22	339.78	7,475.16
Ranges	328	255.82	83,908.96
Water Heaters	133	124.96	16,619.68
Ironers	49	161.16	7,896.84
Vacuum Cleaners	919	75.09	69,007.71
Clothes Washers	236	186.78	44,080.08
Clothes Dryers	18	230.66	4,151.88
Dishwashers	17	309.09	5,254.45
Garbage Disposers	7	124.82	873.75
Air Conditioning Units	4	2,718.50	10,874.00
Refrigerators, commercial	6	832.27	4,993.62
Ice Cream Cabinets	3	228.33	685.00
Freezing Cabinets	4	521.25	2,085.00
Beverage Coolers	25	293.33	7,333.20
Ice Makers, Water Coolers	2	225.95	451.89

Looks good from all angles!



No matter how you look at Tecumseh Hermetic Compressors . . . whether with an eye for design, engineering, construction, or high operating efficiency . . . you'll find them clear-cut leaders on all counts for any application within their range. They're smooth, quiet, dependable in operation . . . precision built throughout to assure long-life, trouble-free performance. And important, too, from a cost point of view, they're available to manufacturers of complete products, or they can be supplied on high-sides or incorporated in completely sealed systems. So get the facts . . . all the facts on Tecumseh Hermetic Compressors. Single and twin cylinder models . . . ⅛ to ½ horsepower . . . Freon 12 or Freon 22 . . . for a wide range of domestic and commercial applications. Write today for complete information.

Chieftain

TECUMSEH PRODUCTS COMPANY

Tecumseh, Michigan

EXPORT DEPARTMENT • 2111 Woodward Avenue • Detroit 1, Michigan

THE WORLD'S LARGEST INDEPENDENT PRODUCER OF COMPRESSORS AND CONDENSING UNITS FOR THE REFRIGERATION INDUSTRY

ALL THE MARKETS OF AMERICA ARE OPEN TO JORDON DEALERS

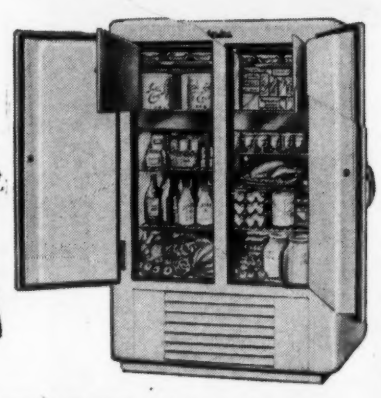
TWO TEMPERATURE REFRIGERATORS · UPRIGHT ICE-MAKER · TABLE-TOP REFRIGERATOR

Time proven models that bridge the gap between the commercial and the domestic market thus opening many new doors of business for JORDON dealers. Both of these models have the essential refinements that make them acceptable to large homes, country estates, show kitchens, etc., and the large capacity required by boarding houses, farms, clubs, fraternities, restaurants, hotels, institutions. Priced for volume selling.

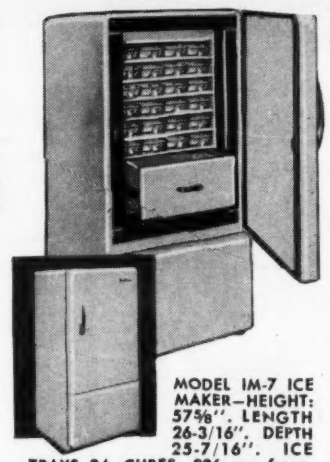
Convenient shelf height eliminates stooping and speeds service. Takes very little floor space and modern design permits "out front" use.

For kitchenettes, professional offices, studios, recreation rooms, trailers, camps, for holding biologicals and for under-counter use.

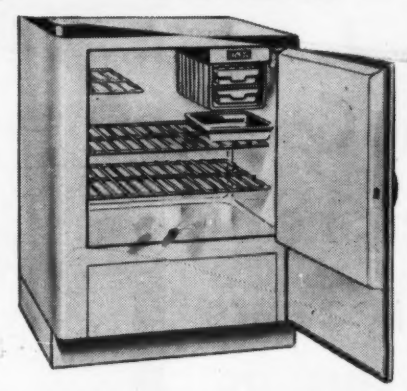
MODEL JORDON 10/4—10 ft. Normal refrigeration. 4 cu. ft. Freezer-locker. 12 lbs. ice making. ONE condensing unit. HEIGHT 68". LENGTH 39". DEPTH 29". INTERIOR: stainless steel. EXTERIOR: Hi-baked white.



MODEL JORDON 14/6—14 ft. Normal refrigeration. 6 cu. ft. freezer-locker. 16 lbs. ice making. ONE condensing unit. HEIGHT 71¼". LENGTH 43½". DEPTH 31". INTERIOR: stainless steel. EXTERIOR: Hi-baked white.



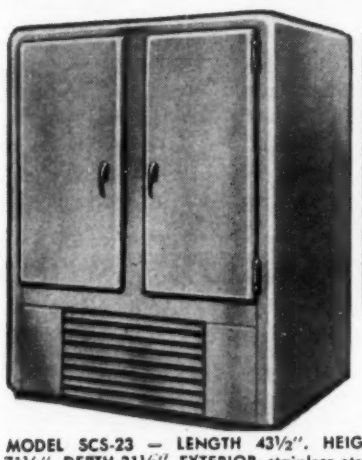
MODEL IM-7 ICE MAKER—HEIGHT: 57⅝". LENGTH 26-3/16". DEPTH 25-7/16". ICE TRAYS 24. CUBES: 336 per freezing. EXTERIOR: Hi-baked white. Hermetic sealed unit.



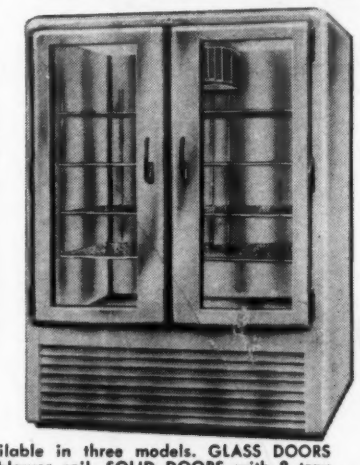
THE JORDONETTE—3½ cu. ft. Porcelain work-top. Interior light. INTERIOR: Porcelain. HEIGHT 34½". LENGTH 24½". DEPTH 23½". Hermetic sealed unit.

WHITE AND STAINLESS STEEL REACH-IN REFRIGERATORS

JORDON reputation for fine reach-ins goes back many years and is based on a thorough understanding of commercial requirements. The new JORDON—30 series, of which two models are illustrated, gives JORDON dealers the finest value and the most saleable reach-ins on the market today. The complete JORDON reach-in line covers every commercial field.



MODEL SCS-23 — LENGTH 43½". HEIGHT 71¼". DEPTH 31½". EXTERIOR: stainless steel, or hi-baked white. INTERIOR: Natural aluminum and stainless steel. BLOWER COIL or heavy duty ice maker. Hermetic sealed unit.



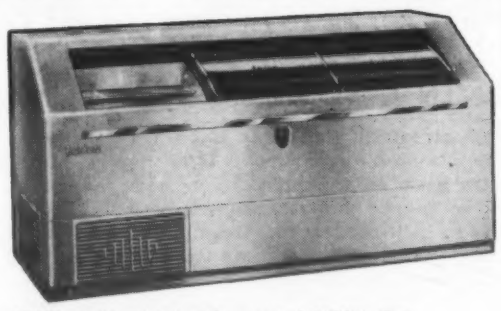
MODELS SCS-30JFC and SCS-30G—Available in three models. GLASS DOORS with blower coil. SOLID DOORS with blower coil. SOLID DOORS with 8 tray ice maker. LENGTH 53". HEIGHT 73". DEPTH 33". INTERIOR: Aluminum, stainless steel floor. EXTERIOR: Polished stainless steel. Aluminum back. Hermetic sealed unit.

MODEL SCS-60—LENGTH 83". HEIGHT 71¼". DEPTH 31". EXTERIOR: High polished stainless steel. Available with meat hooks or adjustable shelves.

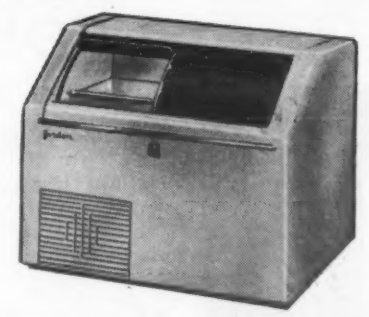
STAINLESS STEEL BEVERAGE COOLERS AND ALL-PURPOSE REFRIGERATORS

The JORDON S-40 Series of Stainless Steel Beverage Coolers gives JORDON dealers the type of equipment that builds respect and high standing. The S-40 line combines fine workmanship and styling with many new and desirable features including food or glass storage shelf, self-contained hermetic sealed units, and lifetime stainless steel.

MODEL S-40-8 (26 cases)—LENGTH 97". HEIGHT 40". DEPTH, top 15". Bottom 28".



MODEL S-40 6'—3" (18 cases)—LENGTH 76". HEIGHT 40". DEPTH, top 15". Bottom 28".

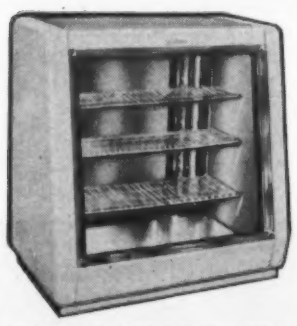


MODEL S-40 4'—6" (12 cases)—LENGTH 55". HEIGHT 40". DEPTH top, 15". Bottom 28".

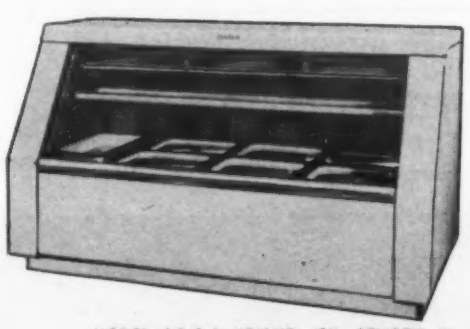
Hermetically sealed unit. Roll back insulated doors. Automatic de-frosting. Forced air circulator. Stainless steel exterior top and front. Stainless steel and natural aluminum interior. Auxiliary shelf for glasses or food.

FULL VISION AND DOUBLE-DUTY DISPLAY CASES

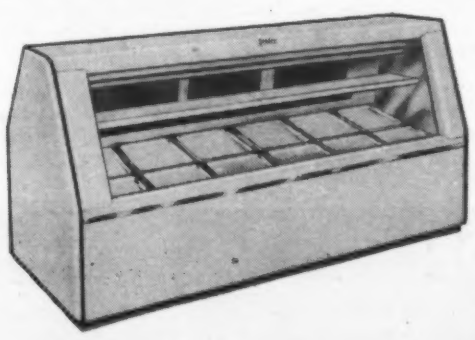
Modern merchandising requires an unobstructed view and brilliant lighting of showcase contents. These modern JORDON Refrigerators meet today's requirements for displaying meats, fish, delicatessen, candy, bakery products, bottled goods. They are standard equipment in America's leading independents, chains, and super-markets.



MODEL FV-4—HEIGHT 50". LENGTH 4'. Available with self-contained condensing unit in counter extension. Adjustable shelves. Fluorescent lighting. Ball corner ends.

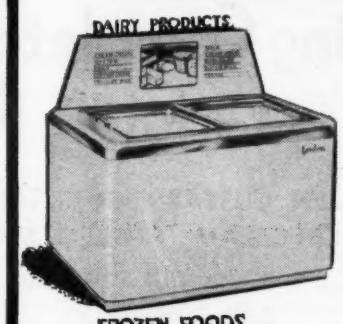


MODEL LC42-6—HEIGHT 42". LENGTH 6' EXTERIOR: Porcelain top and front. INTERIOR: stainless steel and natural aluminum. Also available in 8' models—stainless steel.



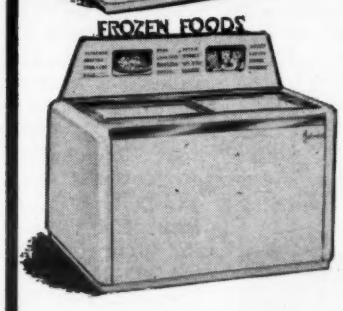
MODEL P-50—HEIGHT 50". LENGTH 8'. EXTERIOR: Porcelain. INTERIOR: stainless steel.

FROZEN FOOD AND ICE CREAM MERCHANDISERS



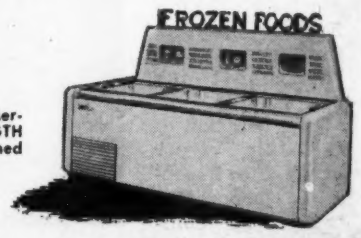
MODEL D-9 — Open top. 9 cu. ft. 360 pint packages. HEIGHT with super-structure and plastic letters. 58¼". LENGTH 54¼". DEPTH 30". Casters available. Self-contained hermetic sealed unit.

MODEL M-9, as above, with sliding glass THERMOPANE doors. Can also be used as a display or storage refrigerator for dairy products or for other high-temperature requirements.



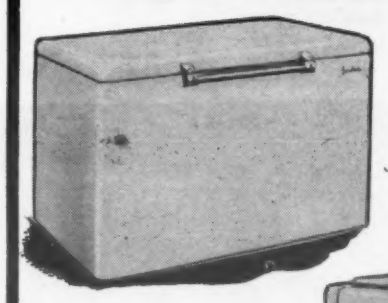
MODEL M-16—Sliding glass THERMOPANE doors. HEIGHT 58¼". LENGTH 75". DEPTH 29". Wide opening gives more convenient access to contents and excellent display. No need to "bury" products or brands at the bottom.

MODEL M-24—Frozen Food Merchandiser. HEIGHT 58¼". LENGTH 105". DEPTH 29". Self-contained hermetic sealed unit.

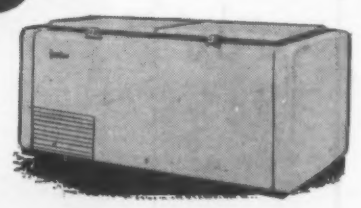


SEPARATE SUPERSTRUCTURES
Standard lengths to modernize any type ice cream, dairy, or frozen food cabinets. PLASTIC formed letters, any words or slogans.

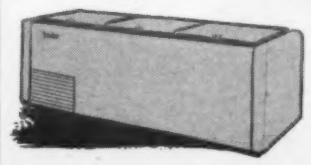
HOME AND FARM FREEZERS



MODEL TC-9 — Home freezer with self-balancing lid. HEIGHT 38". LENGTH 53½". DEPTH 28½". Hermetic sealed unit.



MODEL TC-16 — Home freezer. HEIGHT 36". LENGTH 75". DEPTH 29". Hermetic sealed unit.



MODEL TC-24—Large capacity freezer. HEIGHT 36". LENGTH 105". DEPTH 29".

Write for data sheets

Jordon
AMERICA'S MODERN COMPLETE LINE

JORDON REFRIGERATOR CO.
Factory and Sales Division
58th St. and Grays Ave., Phila. 43, Pa.
CABLE: "JORDONREF" **BEIgrade 6-4510**
EXPORT DEPT.: 55 W. 42nd St., New York 18, N. Y.
Phone Lackawanna 4-1846

EXTRA

FREEZ-KING FLASH

EXTRA

FREEZ-KING CORPORATION FEBRUARY 7, 1949 VOL. 1, NO. 2

FREEZ-KING AND MILLS FREEZERS MERGE SALES ORGANIZATION

Top Men of Freezer Industry Head Sales of Freez-King Corp. Now Offering Complete Line of Freez-King and Mills Freezers

FREEZ-KING FOR FROZEN CUSTARD, SOFT ICE CREAM, ETC. MILLS FREEZER FOR ICE CREAM, FROZEN MALTS, ETC.

The announcement that the Freez-King Corp. was appointed exclusive national distributor for Mills Freezers completed a sales and merchandising set-up that is without parallel in the Freezer Industry.

Four of the most prominent and experienced executives in the entire industry formed the nucleus of the sales and developments of Freez-King Corporation. The result was the new, continuous Freez-King Freezer—perfect for frozen custard, soft ice cream, etc.

A. E. "Al" Wilson

The addition of the Mills Freezer gives the Freez-King Corporation the most complete and the most efficient group of freezers in the market. The Mills Freezer is ideal for ice cream, frozen malts, etc.

Walter C. Graves

The executive line-up at the Freez-King Corporation reads like the Who's Who of the Freezer Industry.

A. E. "Al" Wilson, Director of Sales, was for the past 18 years General Sales Manager of the Freezer Division of Mills Industries.

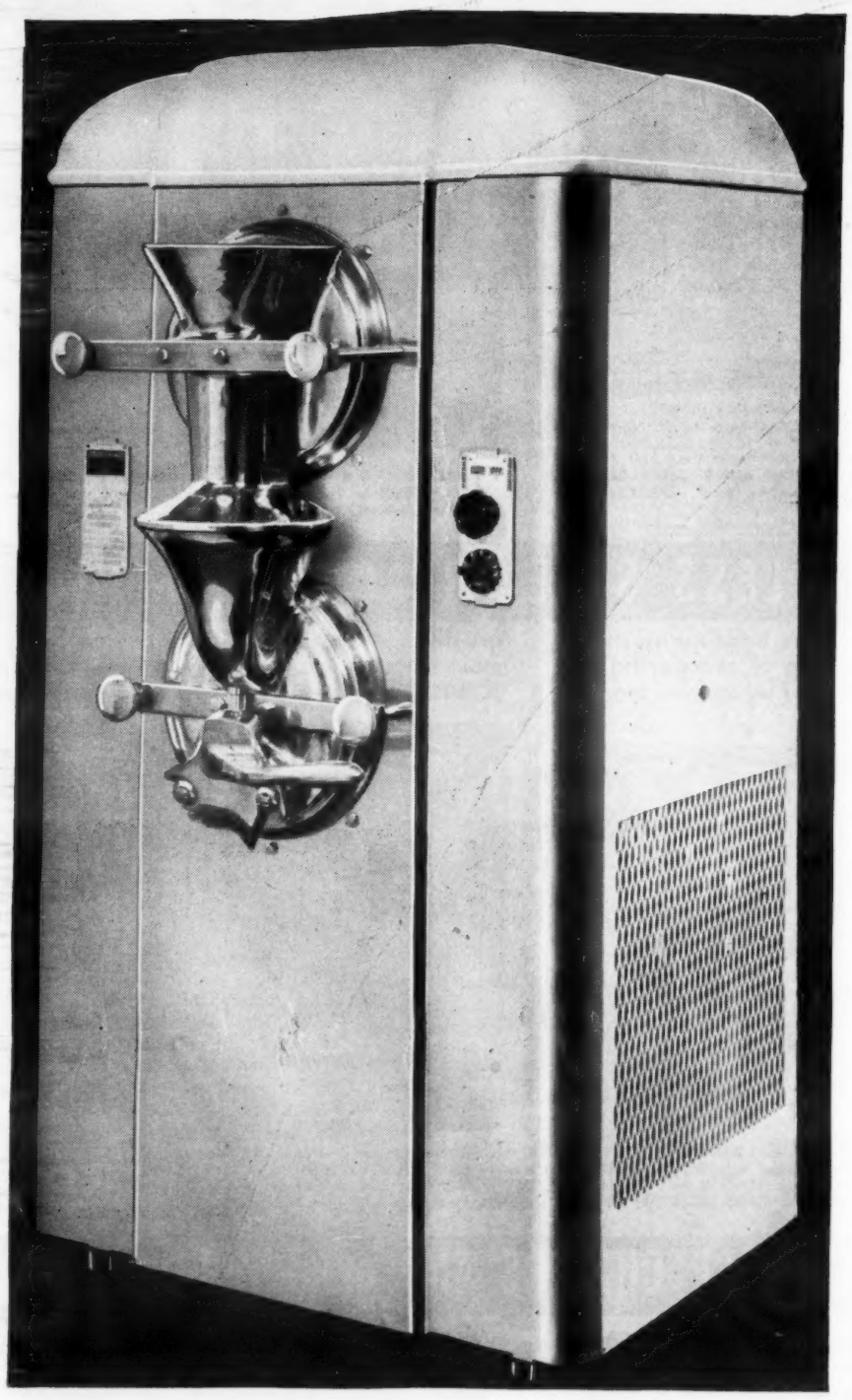
Walter C. Graves is Director of Sales, Eastern Division. Mr. Graves has been associated with Mills Industries as Assistant General Manager for over 14 years.

Larry H. Ounsworth, Vice President in charge of National Accounts and Sales Promotion, was for many years with Taylor Freezers, in charge of sales to national chain accounts. He has installed many hundreds of frozen malt and frozen custard freezers all over the world in variety stores, department stores, chains, etc.

L. H. Ounsworth

Leo S. Maranz, President of the Freez-King Corporation, has been associated with the freezer industry for over 23 years in both sales and design. He has designed and headed sales for several freezers now on the market, including the Knight-Freezer, manufactured by Bastian Blessing and the Tuthill Freezer.

Leo S. Maranz



CONTINUOUS FREEZ-KING

FOR FROZEN CUSTARD, SOFT ICE CREAM, ETC.

This smartly styled, streamlined freezer is only 18" deep, 24" wide and 46" high. Its life-time stainless steel front, and highly polished dairy metal castings throughout, adds to the attractiveness of any store interior. It is portable and can be placed almost anywhere—no plumbing is necessary, the unit is completely self-contained. Because of its simplified design it is more compact, easily installed in a small space.

Retail Profits --$80 to $100 per DAY

ACTUAL COUNTER TESTS have proven that FREEZ-KING will produce from $3.65 to $4.20 on each and every gallon of mix used. The average cost of one gallon of 6% frozen custard mix is $1.00 (this price varies depending on locality). Since the FREEZ-KING at full capacity will freeze more than 40 gallons of mix per 10-hour day, the total profit can run over $100.00 per 10-hour day. It pays more profit per square foot than any other store equipment.

Merger Causes Stir In Freezer Industry

The announcement that Freez-King Corporation was appointed national distributor for Mills Freezers fell like a bombshell among members of the freezer industry.

With a top-notch sales organization and two of the outstanding freezers in the market, the Freez-King Corp. is in an enviable position to develop a great volume of freezer sales.

No one freezer on the market can efficiently produce and serve *all* the frozen products demanded by the American public, but the Freez-King Corporation can offer a complete line of freezers and hardening cabinets that cover all frozen product requirements.

The continuous Freez-King freezer is perfect for frozen custard, soft ice cream and similar products. The Mills Freezer is perfect for ice cream, frozen malts, and similar products. Together they form an unbeatable selection for every purpose.

A few exclusive territories are still available on both FREEZ-KING and MILLS FREEZERS

Write for Information

Freez-King Facts

Among the many interesting points about Freez-King is the fact that the new model 300-49 not only favorably compares with higher priced machines, but in many cases offers retailers several features that are not found on the larger, more expensive freezers. The versatility of the new portable Freez-King is ideally illustrated by its ability to produce soft ice cream, frozen custard, and similar frozen desserts, continuously, efficiently and rapidly. Look at these outstanding Freez-King features:

(1) CONTINUOUS—an ever-full freezer that automatically refills with mix as the finished product is drawn off.

(2) PORTABLE—18 inches deep, 24 inches wide and 46 inches high, the FREEZ-KING can be placed in any convenient spot. No plumbing necessary.

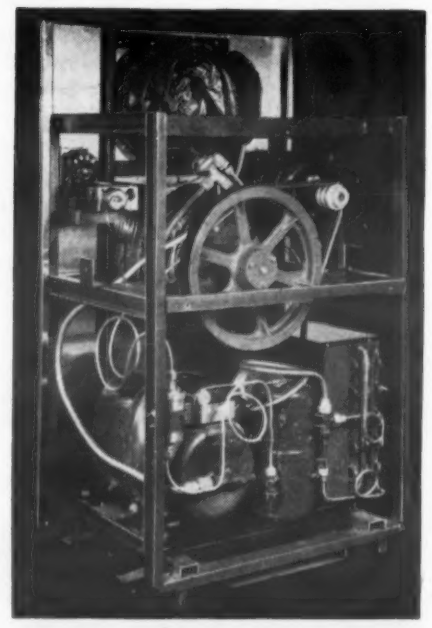
(3) FULLY AUTOMATIC—a special temperature control maintains uniform temperature at all times.

(4) METER MEASURE—a special automatic mix meter measuring device releases amount of mix equivalent to that served.

(5) LOW PRICED—priced well within reach of average retailer—and with higher than average distributor discount.

(6) RAPID SERVICE—draw-off gate has knife type action, permitting a fine stream for quick filling of even the smallest 5¢ container. Serves 300 or more cups per hour.

(7) ECONOMICAL—cost of operation is so small it can hardly be measured—and it's built to last a life time.



(8) EASILY SERVICED—all panels are quickly removable for instant service.

(9) VERSATILE—the finest freezer for frozen custards, soft ice cream and other frozen desserts.

(10) STRONG—Beater motor is ¾ H. P. Compressor is ¾ H. P. air-cooled, hermetically sealed.

FREEZ-KING CORPORATION

FACTORY & GENERAL OFFICES

2518 MONTROSE AVENUE

CHICAGO 18 • COrnelia 7-2070

★ Manufacturers & Distributors of FREEZ-KING FREEZERS ★

Exclusive National Distributors of MILLS FREEZERS ★

EXTRA **MILLS FLASH** EXTRA

MILLS INDUSTRIES, INCORPORATED — FEBRUARY 7, 1949

FREEZ-KING Corp. NAMED NATIONAL DISTRIBUTORS of MILLS FREEZERS

Successfully Used Throughout the Country Since 1931. Made in Two Popular Capacities!

TOP MILLS MEN HEAD SALES OF ENLARGED FREEZ-KING Corporation

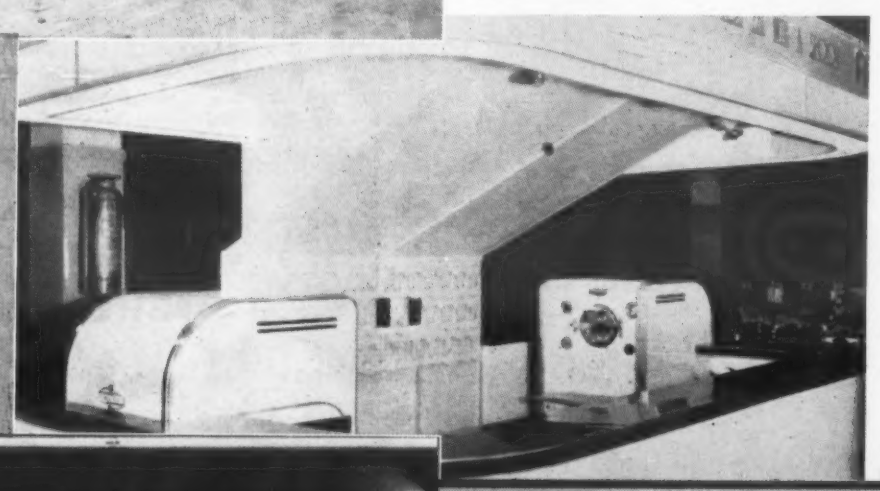
President Leo S. Maranz of Freez-King Corporation with 23 years' experience in the freezer field has associated with him L. H. Ounsworth, who has sold and installed freezers all over the world; A. E. "Al" Wilson, for 18 years general sales manager of the Freezer Division of Mills Industries; and Walter C. Graves, assistant sales manager for the same company. The latter two are Director of Sales and Director of Eastern Sales of Freez-King Corporation, respectively.

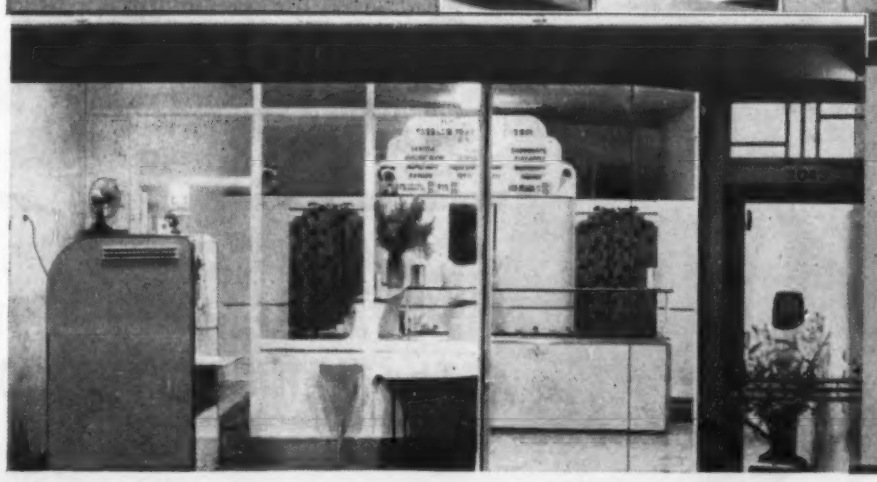
Mills Freezers Have Been Making Money For Their Owners For Many Years.

Mills Ice Cream Freezers have made profits for many years for a growing number of drugstores, grocers, super-markets, hotels and restaurants, ice cream parlors, milk stores, clubs, amusement centers, road stands, delicatessen stores. Sanitariums, hospitals, and institutions use them to provide fresh-made, tempting ice creams and frozen malts at low cost.

OVER 12,000 SATISFIED USERS

1. Mills Freezers in institutions, hospitals and as above in Glen Lake Sanitarium provide ice cream economically and whenever needed.
2. Refreshment enterprises like David Spencer's shown at right serve tempting, fresh-made ice creams, frosted malted with Mills Freezers prominently displayed.
3. Below is a typical Ice Cream Store. Note the prominent location of the Mills Freezer.





Mills Freezers Are Entirely Automatic

Just pour in the mix and flavor, set the controls and the Mills does the rest. The Automatic Temperature Regulator maintains the correct temperature after freezing: the Freezing Time Control shuts off refrigeration when the freezing is complete.

There is an Agitator Control which can be set on "automatic" or operated by foot pedal. Stepping on pedal causes agitator to run while removal of foot stops the agitator. This is used particularly for serving Frosted Whip or Frozen Malt direct from the freezer head.

The perfected Mills Agitator whips the mixture to the proper overrun. The Automatic Regulator maintains the temperature and helps keep overrun and consistency at the proper point.

In a few minutes it's ready to draw into cups, cartons or cans.

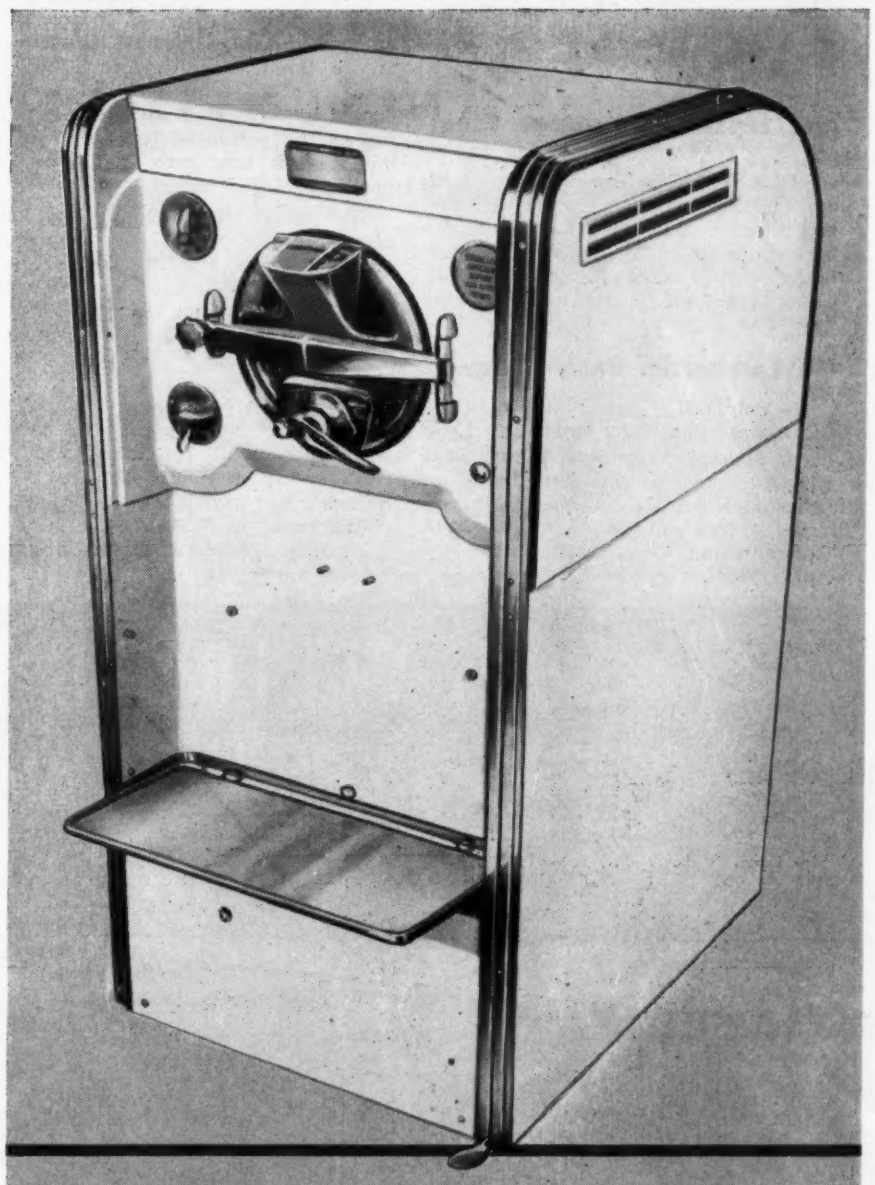
It isn't necessary to "draw-off" the moment the batch is completed. In fact, you may wait as long as an hour if necessary. The Super-Automatic holds that ice cream—smooth, perfectly refrigerated and finished. That's why we say this is the freezer for the busy merchant.

But that isn't all. This new Super-Automatic makes better ice cream and makes it safer and surer. Any clerk becomes a master ice cream maker with the Super-Automatic. For instance, when drawing off ice cream into small cups or cartons, the Automatic Regulator stands guard over the freezer cylinder, maintaining proper consistency from the first cup to the last.

CAPACITIES

Two standard sizes: 2½ and 5-gallon, same dimensions except 5-gallon Freezer is 2½ inches higher.

The 2½-gallon Freezer can produce 15 gallons per hour, six 2½-gallon batches. The 5-gallon size, 30 gallons per hour. When ice cream is made in advance for later sale, each batch is drawn off in containers and stored in hardening and dispensing cabinets. In this way a supply is prepared ahead of rush periods for quick service.



MILLS AUTOMATIC ICE CREAM FREEZER

Foot-Pedal Control Allows Drawing Direct From Freezer Head . . .

Hands left free to hold glass or container

To provide quick convenient means of agitator control, the Mills includes a handy foot-pedal control. A touch of the toe is all that is required, thus the hands are free to hold cup or container. No bending over or push buttons to press. As the operator steps on the pedal the agitator is set in motion, and as the foot is removed the agitator stops.

This quick control is important when serving Frozen Malts, Frosted Whip, and similar refreshments direct from the freezer head.

MILLS INDUSTRIES, INC.

4100 FULLERTON AVE. CHICAGO 39, ILLINOIS

Over 60 years experience in the manufacture of Coin-Operated Machines

R. H. Jacobs Appointed to New M-H Schoolhouse Post

MINNEAPOLIS — Appointment of Robert H. Jacobs as superintendent of schoolhouse control sales for the Minneapolis-Honeywell Regulator Co. has been announced by John E. Haines, vice president of the company's commercial division.

The appointment establishes a new position in the company. Jacobs will work directly with Honeywell salesmen throughout the country specializing on the promotion and sale of automatic heating, ventilating, and air conditioning control systems for school buildings. The company manufactures a special line of controls for schools.

A graduate of Marquette university, Jacobs was employed in the sales departments of the Parker Pen Co. and Standard Oil of Indiana before joining Honeywell in 1940.

Fire Destroys Locker Plant

ALLEN, Neb.—The locker plant and electrical appliance store of Rube Hutching, mayor of Allen, was recently destroyed by fire of unknown origin with damage estimated at around $75,000.

G-E Commercial Dealer Named

HAMILTON, Ont., Can. — J. H. Stolker & Son, 125 Bold St., have been appointed dealers in General Electric commercial refrigeration sales and service in the Hamilton area, it was announced by W. Jack Refrigeration Co., distributors.

Report on 'Superchilling' Experiment

Foods Packed at -140° and Shipped In Special Containers Are Claimed To Hold 0° Temperature for Up to 40 Days

HIGHLAND PARK, Ill.—By freezing foods to so low a temperature that, without further refrigeration, it requires 30 to 40 days for frozen foods to warm up to 0° F., a new "Superchilling" process is said to be arousing interest among frozen food processors and shippers.

It was developed by Willard L. Morrison, pioneer freezer inventor, for General American Transportation Corp., working closely with Airtemp Div. of Chrysler Corp. and Monsanto Chemical Co.

Principle of the new process is to pack bulk quantities of frozen food cartons in a large insulated container, freeze them to as low as -120° or -140° F. by immersion in alcohol cooled to -140° F. in an Airtemp unit, fasten the insulated lid, and ship in uninsulated box cars, flat cars, or trucks.

The effects of extremely low temperatures and the high insulating quality claimed for the shipping container combine to keep the temperature of the product below 0° F. for as long as 30 days with ambients of 85° F., it is claimed.

Not only does this new process insure frozen food being held at the proper low temperature throughout shipment but it simplifies handling, the developers point out. It is not necessary to "work" the shipments in cold rooms, for example.

Another problem which Morrison claims to have solved for shippers is loss due to dehydration of frozen foods.

"This is not a method for maintaining an unvarying temperature throughout the period of shipment," Morrison explains. "Temperature change, so long as it does not rise above zero, does not arouse enzyme action in frozen food. We grant that the food will grow warmer, but we have a 120° margin to move in, and we prolong the heat-absorbing process with insulated shipper-containers.

"What we are most concerned with is the problem of a uniform temperature throughout the food mass at any one time, for if the outer layers warm up first, moisture will travel toward the center and leave this food dehydrated. What we have worked for, paradoxically, is efficient heat diffusion evenly throughout."

The shipper-containers employed in the Superchilling process are constructed of corrugated aluminum and insulated with Santocel insulation, which is claimed to have the low "k" factor of .126.

Of great importance in this process is the method of packing of the frozen food cartons in the shipper-containers. Instead of using the conventional paper cartons which will hold 32 1-lb. packages for freezing, these 32 cartons are packed in a throw-away tin "tote" box, which is then hermetically sealed.

The tote boxes are then packed tightly in the shipper-container. The latter will be used in a variety of sizes, ranging in capacity from 500 lbs. to 10 tons, and equipped with varying thickness of insulation. A shipper could thus specify size of container and holding time from seven to 50 days, it is indicated.

After the shipper-container has been packed with tote boxes, it is rolled under a freezing head, jacked up against it to form a seal, and the contents exposed to a circulating rain of alcohol which has been cooled to as low as -140° F. by the Airtemp unit.

Design details of the refrigerating unit have not been released, but it is understood that this Airtemp system is a two-stage arrangement employing propane and ethylene as the refrigerants.

Following freezing by this immersion process for a pre-determined length of time, the shipper-container is lowered from the freezing head and the insulated cover secured with lugs. The container is then ready for shipment.

Comparisons of cost of the overall refrigeration required by the Superchilling process in contrast with that of the conventional ice and salt and dry ice method have been made by James P. Replogle, associated with Morrison in this development.

Apparently, the Superchilling process is more expensive than using ice and salt, but Replogle contends that "the two processes are in no sense competitive, since the ice and salt method could not result in the delivery of frozen foods in proper condition in hot weather."

In the comparison of Superchilling and dry ice shipments, the former is calculated to be considerably less expensive in cost per ton of food.

Cleveland Electrical Group Elects A. F. Head President

CLEVELAND—A. F. Head, district manager for the General Electric Supply Corp. here, has been elected president of the Electrical League of Cleveland to succeed Jack E. North, who has held that post for 26 consecutive years, the board of directors of the league announced recently.

North was elected honorary president.

Other officers elected were: Will T. Clark, residential sales manager of The Cleveland Electric Illuminating Co., executive vice president; Frank J. Hopperton, president of Elliott Electric Co., and K. R. Schuele, vice president of The Fries & Schuele Co., vice presidents. Stanley E. Strunk was re-elected secretary-treasurer.

Champagne's Opens New Store

ALBANY, N. Y. — Champagne's has opened a new appliance store at 38 S. Pearl St. The firm was formerly located at 18 S. Pearl St.

The opening was in conjunction with the firm's 30th anniversary. Leonard Briskman is president.

Large N. Y. Dealer Seeks Major Appliance Trade-Ins

NEW YORK CITY — "Trade in your old refrigerator." "Trade in your old fashioned washer."

Those were the themes of a full-page newspaper advertisement run here recently by the Davega chain of appliance and radio stores. It was claimed to be the first trade-in advertisement by a major retailer since the war and the first by Davega in seven years.

The advertisement labeled January as trade-in month. The products featured were four Frigidaire refrigerator models and the Frigidaire automatic washer.

No prices were given but "easy terms" with 65 weeks to pay were stressed.

The advertisement stated, "We assure you a courteous free estimate on the value of your old fashioned, out-of-date washer, at no obligation to you—and we promise truly generous allowances."

A coupon that invited the store to make a free trade-in estimate was included in the advertisement.

An official of the store said that the appliances taken in trade would be sold to other dealers. He also indicated that the trade-in offer might be extended beyond this month if the response warranted.

Spokane Club Women Want Demonstrations Of Home Freezers

SPOKANE, Wash. — Twenty-nine per cent of Spokane club women answering a recent survey made by the Inland Empire Electrical Dealer's Association indicated that they wanted to see demonstrations and hear discussions of home freezers.

That was revealed in results announced by the association. The group circulated a questionnaire to all members of clubs affiliated with the Spokane Federation of Women's Organizations asking the question: "Which of the following appliances would you especially like to have demonstrated and discussed by a consumer panel?"

The favorable responses were tabulated as follows:

Ironers and pressure cookers	33%
Home freezers and garbage disposal units	29%
Automatic washers and clothes dryers	26%
Dishwashers	23%
Kitchen cabinets, electric ranges, and refrigerators	17%
Steam irons, vacuum cleaners, electric mixers	10%
Roasters, water heaters, conventional washers, hand irons, and coffee makers	3 to 6%

About one third of the housewives expressed an interest in learning more about special dishes that can be prepared in the refrigerator, the association declared.

More than one third wanted to find out more about the use of deep-well cookers on ranges.

"These findings will guide the development of the consumer education program," the association asserted in its monthly bulletin. "But they reveal the tremendous latent demand for all types of appliances."

see NATIONAL LOCK first

FOR LOW TEMPERATURE REFRIGERATOR HARDWARE

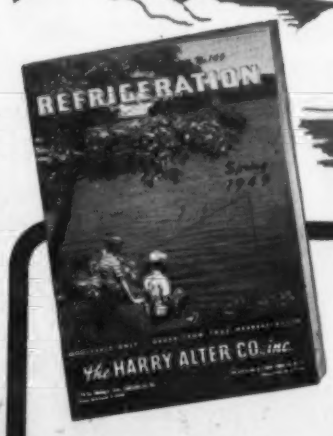
WRITE FOR DESIGN DETAILS ON SURFACE, "THRU-THE-DOOR" AND "EDGE-MOUNTED" TYPES

NATIONAL LOCK COMPANY

ROCKFORD • ILLINOIS

REFRIGERATOR HARDWARE DIVISION

Here's Your Copy of the New DEPENDABOOK No. 149



Refrigeration PARTS CATALOG

Send for this to-the-trade-only catalog of refrigeration parts and supplies . . . Very complete . . . Very handy to use . . . In use all over the world!

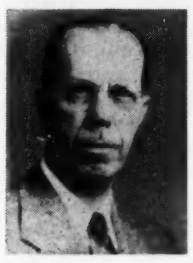
The HARRY ALTER CO.

1728 South Michigan Avenue • Chicago 16, Ill.
134 LaFayette Street • New York 13, N. Y.

WHOLESALE ONLY

Koch Names Pacific Area Distributor Sales Head

NORTH KANSAS CITY, Mo.—George A. Klopp, for several years in charge of Koch Refrigerator Co. distributor sales in the South, has returned to the Koch organization in charge of distributor sales in the Pacific area, the company has announced.



George A. Klopp

He will serve as western representative in 11 Pacific and mountain states, with headquarters located in Albuquerque, N. M.

Klopp was with the Koch organization for several years before the war, but left to enter the Army Air Forces in 1942. He served throughout the war and was placed on the inactive list recently as a Lieutenant Colonel, Air Force Reserve.

Klopp's experience with commercial refrigeration and appliances dates back from 1935 and includes service as sales manager of Holcomb & Hoke Mfg. Co. of Indianapolis.

Instrument Firm Builds Addition for Assembly

PITTSBURGH—Work has begun on an addition to the building at 5151 Baum Blvd., here, owned by the Foxboro Co. of Foxboro, Mass., makers of industrial instruments for measurement and control, the company has announced.

The building, erected in 1941, is wholly occupied by the company's Pittsburgh branch, which serves western Pennsylvania and parts of West Virginia, in addition to Kentucky, and Ohio.

The new addition, to be occupied in the early spring, will be used for the assembling of control valves and for warehousing an increased stock of valves and instruments.

A. H. Shafer, who joined the company in 1921, has been in the Pittsburgh territory since that time, and has been district manager since 1930.

Edmundson To Be Midwest Sales Mgr. for Victor

HAGERSTOWN, Md. — A. J. Edmundson has been appointed sales manager of the midwest sales division of Victor Products Corp., the company has announced.

Edmundson, who was formerly general manager of Edmundson Refrigeration in Raleigh, N. C., will make his headquarters in Kansas City, Mo. and cover the states of Missouri, Kansas, Nebraska, Arkansas, and western Iowa.

He is a former secretary of the National Commercial Refrigeration Association.

HOTEL STRAND

ATLANTIC CITY'S HOTEL of DISTINCTION

Devoted to the wishes of a discriminating clientele and catering to their every want and embracing all the advantages of a delightful boardwalk hotel.

Spacious Colorful Lounges—Sun Tan Decks atop—Open and inclosed Solaria—Salt Water Baths in rooms—Garage on premises. Courteous atmosphere throughout.

When in Atlantic City visit the

FAMOUS FIESTA LOUNGE

RENOWNED FOR FINE FOOD

OPEN ALL YEAR

Under Ownership Management

Exclusive Penna. Ave. and Boardwalk

Dealer Agrees To Service Any Item the Store Sells

ERIE, Pa.—Niederriter Co., Inc. appliance dealer here, used a newspaper advertisement recently to stress its service. The advertisement carried a cartoon of a serviceman at work and was headed with the caption: "We Service Whatever We Sell."

Advertising copy read: "To bring you the very finest, time tested electric appliances we believe to be only half of our obligation to you. If we stopped with that . . . you should of course be thoroughly dissatisfied.

"That is why at Niederriters our trained service staff is considered an integral part of each sale. You take home the best products on the market and you take with them the assurance that you will receive prompt, expert service whenever necessary. We KNOW what we sell . . . and we service what we sell."

Bert Miller Heads RSES Niagara Frontier Chapter

BUFFALO — Bert Miller of the Miller Electric Co. in Medina is the new president of the Refrigeration Service Engineers Society, Niagara Frontier Chapter. He was installed at an annual dinner in the Stonecroft Restaurant on Delaware Ave., Jan. 22.

Other new officers are: Edward Orsolits, first vice president; Thomas Secord, second vice president; Leon McCormick corresponding secretary; Henry Pohl, recording secretary; Walter Bozzien, treasurer; and William Moser, sergeant-at-arms.

Borden Cabinet Department Moves to New Headquarters

CHICAGO—The Borden Co.'s Cabinet Department has been moved to 2555 W. Diversey Ave., Chicago 47, according to an announcement by W. J. Hoeger, superintendent of the department.

Delta Rewa Elects Marshall as Chairman

JACKSON, Miss.—Jim Marshall of Standard Brass & Mfg. Co. of New Orleans was elected chairman of the Delta Refrigeration Wholesalers Association—Rewa Region No. 12—at a recent meeting of the group here.

Other association officers elected at the meeting were: R. E. Gennett of Refrigeration Supplies Distributor, Birmingham, Ala., vice chairman; and Miss Hazel McQuiston of United Refrigeration Supply Co., Memphis, Tenn., secretary-treasurer.

R. E. Warwick of Plumbing Wholesale Co., here was named a director to the Refrigeration Equipment Wholesalers Association.

Applications for membership to the Delta group by the following firms were accepted: Acme Refrigeration Supplies, New Orleans; Motor Supply Co., Meridian, Miss.; Refrigeration Supply Co., Jackson, Miss.; Komp Equipment Co., Hattiesburg, Miss.; and N. O. Nelson Co. (branch) Jackson.

Jokester Might Sing 'One Meat Ball'

NEW YORK CITY—A supermarket here, featuring self-service prepackaged meats, has installed a public address system that customers can use to request meats not on display in the self-service cases, the *New York Times* reported recently.

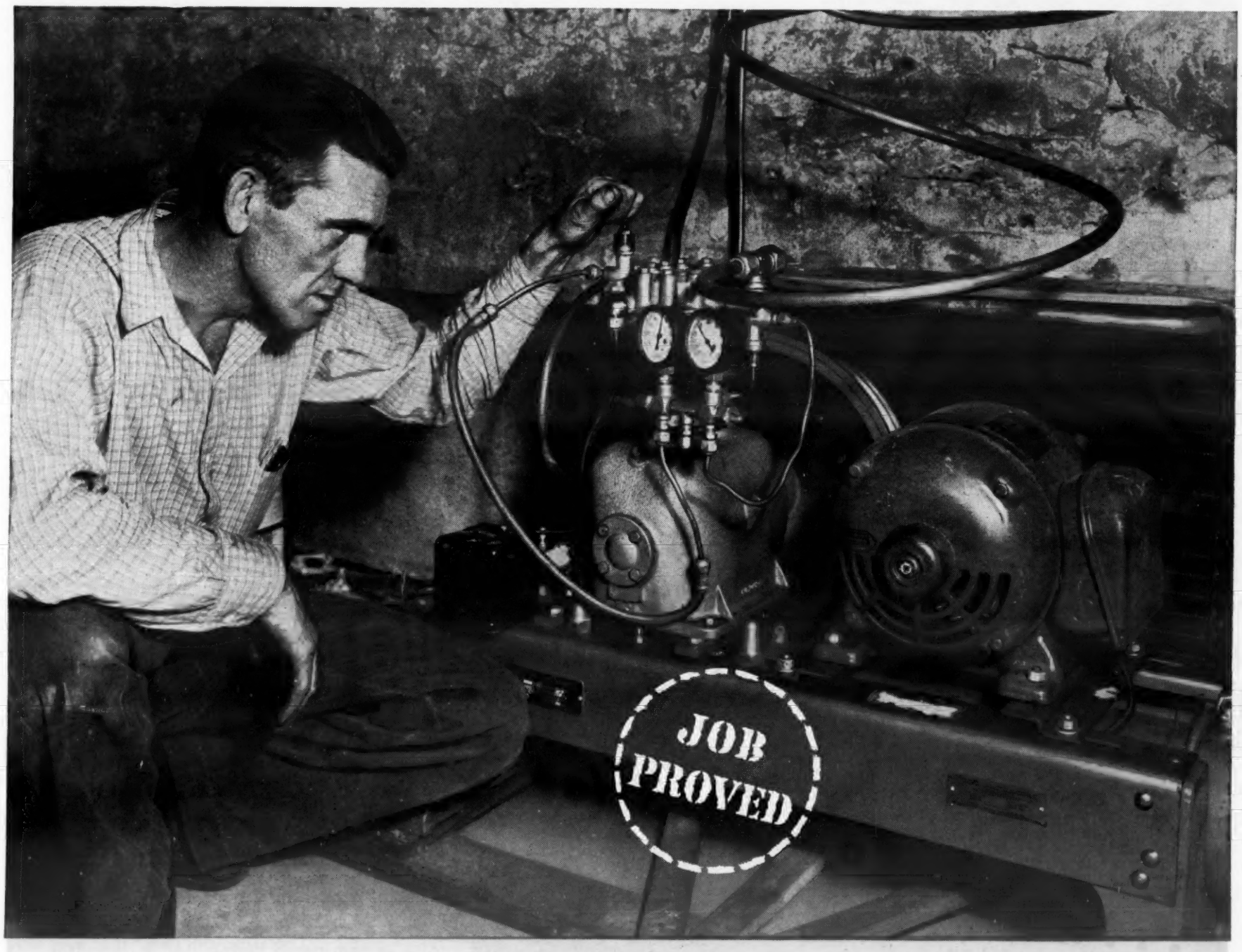
The amplifier of the public address system is located in the meat-cutting and packaging room.

Eastern Servicemen Elect Ralph Mattison President

ELMIRA, N. Y.—Ralph Mattison of Elmira was elected president of the Southern Tier Chapter of the Refrigeration Service Engineers Society.

Earl C. Dee of Corning was elected first vice president; George Pickel of Elmira, second vice president; and Harold Beach of Ithaca, treasurer.

The new officers will be installed at the annual dinner Feb. 17.



EASING A FREEZING PROBLEM

Suniso Oil Keeps a Compressor in 100% Troublefree Service After Competitive Refrigeration Oil Fails in a Few Days

An ice cream parlor opened for business with a brand-new refrigerating unit. The machine was located in a poorly ventilated basement, where summer temperatures run in the high 90's. In a few days it heated up; next it ran spasmodically; then, in less than two weeks, it quit running altogether—right at the start of the busy season.

The compressor was taken down and found to be heavily gummed with sludge and carbon on walls and valves. The oil had proved unequal to the job. The unit was cleaned with the aid of kerosene and chemicals. It was then charged with a "Job Proved" Suniso Refrigeration Oil. No trouble of any kind has been encountered since. None due to the lubricant need be expected—judging from the record of Suniso in the service of others.

From ice cream parlor to office building, the demand for Suniso is outstanding in the world of refrigeration and air-conditioning—Suniso Oils are the predominant choice of equipment manufacturers in this field.

Suniso Oils come in several grades, each with extremely low pour-point and low wax-separation point. They have exceptional dielectric strength and high resistance to chemical change when mixed with Freon or any other modern refrigerant. For your copy of the 52-page illustrated bulletin "Lubrication of Refrigeration and Air-Conditioning Equipment," write Department RN-2.

SUN OIL COMPANY · *Philadelphia 3, Pa.*

In Canada: Sun Oil Company, Ltd.
Toronto and Montreal

SUN PETROLEUM PRODUCTS

"JOB PROVED" IN EVERY INDUSTRY

SUNOCO

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

occasionally embarrassed—like the time when his Best Customer was emceeing a convention dinner at which this chap was the main Speaker

While the hilarious banqueteers slupped their after-dinner coffee *and* whiskeys and soda, the Biggest Customer leaned over and tapped this chap lightly on the shoulder.

"Would you like to give your speech now?" whispered the Brass Hat, "or shall we let the boys go on enjoying themselves a while longer?"

Add Kid Stories I

As a child, Dolores had always confided in Uncle Gus, the neighborhood candy store proprietor. They were great pals. After she was graduated from high school, however, Uncle Gus didn't see her for almost a year. Dolores had taken a job.

She was a cute trick, and the E-Z Duzit Bubble Gum Co. had hired her to stand on prominent street corners and pass out free packages of their product. The pay was good, but the hours were long. And so it happened that Dolores never got home before the candy store closed.

Almost a year to the day after Uncle Gus last had laid eyes on her, Dolores popped into his confectionery.

"Uncle Gus!" she cried, hugging him and pirouetting all around the store. "I'm so happy! I'm gonna get married to a guy I met who's in the same company with me."

"Sweetheart," choked up Uncle Gus, wiping off his spectacles, "I'm happy for you. But where have you been this last year? What have you been doing?"

"Passing out free samples," sang Dolores.

"Well," said wise old Uncle Gus, "it works every time."

And Freely Flowed the Vodka

It was at one of these lavish Russian Embassy parties in Washington that the following exchange of malice-aforethought wisecracks took place.

IVANOFF: "You call your country The Land of the Free. And I believe you now, after reading statistics on the rising number of divorces in the United States."

SMITH: "True, true. And America must be the Home of the Brave, also, because every year in our country more and more people marry or marry again."

No Argument

Skeezicks Skizoid, an insane asylum inmate, had seemed so lucid lately that it was recommended he be released from the institution.

Appearing before a board of examiners, Skeezicks answered questions sanely and clearly . . . all the questions save the last one:

"Mr. Skizoid" (this was the question he flunked) "when you go back to the normal, civilized world, will you also go back to women and liquor?"

"Not me, Your Honor, not me."

After a short huddle, the board of examiners nixed his petition for release. It was their unanimous decision that he was crazy as a loon.

Companion Piece:

First Nut: "What makes you think you're Napoleon?"

Second Nut: "I know I am 'cause God told me so."

Third Nut: "You're crazy. I never said no such thing."

Last Gasp:

Mrs. Dogooder and her party, on an inspection trip through the State Home for the Feeble-Minded, were escorted to an open-air playground where segregated groups of the inmates were disporting themselves in the sunshine.

"See here, my good man," burbled Mrs. Dogooder, "these people seem to be quite harmless: Is it necessary to put all the women on the far side of the playground, and the men over here, with guards in between? The sexes are equal, you know, in this enlightened age. Why the discrimination?"

"Lady," spoke up a guard, "these people don't have all their buttons, but they ain't insane."

Add Kid Stories II

Mandy's smallest son had been rascally all week. Goaded beyond her strength at his rapscallion escapades, Mandy blew her top.

"You're just like your Daddy. Thank goodness I never married that man!"

They're Precocious Nowadays

Contrary to what usually happens when a gorgeous gal enters, not one male cavalier arose when Miss Eyefull boarded the Fifth Avenue bus. Swaying from side to side, the beauteous babe begged:

"Please, won't one of you gentlemen let a pregnant woman sit down?"

At once she was seated.

"Beg pardon, lady," said the man who had relinquished his place, "but I'd never guess that you were pregnant. Tell me, how long do you have to go?"

The gorgeous gal sighed luxuriously and answered:

"About eight months, three weeks, and eight hours. Mister! Am I grateful for a chance to rest!"

How You Keep 'Em Down on the Farm

Austin Jones of Kerotest reports a true story about a young farmer who found it necessary to purchase a new refrigerator. The price, he was told, would be $275.

This fabulous amount elicited alarmed gasps from the young man's parents, who remembered buying an electric refrigerator a number of years previously for only $129.50. At the time they had purchased this refrigerator, they had sold three cows at $42 apiece to acquire the necessary cash.

The following day, the young fellow put one of his cows in his truck, drove it to the city, and sold it for $300.

Moral: There's gold in them thar hills (and dales). Farmers have never "had it so good."

The Postman Always Dies Twice

Our footsore neighborhood Postman regards the Christmas holiday season in a somewhat different light than do the rest of us. On Dec. 23 last (and he says he'll swear to this on a stack of Bibles) he opened a jam-packed mail box and found some fifty-odd loose stamps stapled to the following note on perfumed blue stationery:

"Dear Mr. Mailman:

"I put my Christmas cards in your mailbox yesterday and later it dawned on me that I'd forgotten to put stamps on them. Here are the stamps. You wouldn't mind sticking them on the envelopes for me would you?"

MRS. SCHMOE

Psychology

Two scientists on leave from the Massachusetts Institute of Technology were aghast as they watched a gang of sailors carelessly unloading materials for the Bikini atom bomb tests.

Although many of the crates were plainly marked "Fragile" and "Handle with Care," they were being tossed around with reckless abandon.

"I wonder," quoth one of the scientists in a booming voice, "which one of those crates holds *the* atom bomb?"

From that point on, all crates, packages, and parcels were handled as though they held the most delicate Haviland china.

Are YOU Interested?

The following letter from a subscriber typifies many similar comments we have been receiving lately.

What do YOU think of the idea?

Universal Cooler
Marion, Ohio

Editor:

I have always been greatly amused by the humorous stories and anecdotes appearing in your weekly "Inside Dope" column of the NEWS.

A collection of these stories would be an invaluable aid to an engineer like myself who is forced with the necessity of making an occasional after-dinner speech, and I am wondering if you had ever given consideration to the matter.

If you do have such a collection available, I would appreciate your advising me as to how I might obtain a copy. You may be sure that it would be greatly appreciated.

L. L. STAEBLER
Engineering Department

Answer:

It may take us awhile, but a handy booklet of "Stories of the Week" *will* be assembled, classified, edited, and published in the not-too-distant future. If a great many of our readers like this idea, and place sight-unseen orders in advance, maybe we can get the price down quite low.

Creed for Business

With an "Amen!" we quote the following items from a recent Rogers and Slade house organ:

"EVERY AMERICAN BUSINESS owes something—

"1. To the customers it serves;

"2. To the industry of which it is a part;

"3. To all industry;

"4. To its community;

"5. To the nation which provides its license to do business, and is its support.

"In discharging its debt it should provide products or service at a fair price.

"It should cooperate with its industry in establishing and maintaining fair practices.

"It should play its part in the activities by which all industry governs and advances itself.

"It should contribute its share to the public welfare by devoting some of the time, talent, and energy of its executives to public affairs, local and national."

Confusion Rampant

"We read somewhere the story of an old judge who was famous for the speed with which he handed down his decisions, though unhappily not for their judicial quality.

"Asked how he managed to reach his decisions with such dispatch, the judge explained, 'I listen to the plaintiff. Then I make my decision.'

" 'But don't you listen to the defendant, too?' he was asked.

" 'Well,' said the judge, 'I did at first—but I found that it confused me.' "

"It is so easy to settle a perplexing business problem when only one side of it is considered. Taking a good look at the other side is usually quite confusing. But a solution arrived at without going through a sort of Tunnel of Confusion very often turns out to be an unsound one."

"Which in turn reminds us of the husband who remonstrated, 'But dear—if we buy a used car, how will we pay for it?'

" 'Well at least, Elmer, let's not confuse the issue by considering two problems at one time,' said his wife brightly."

Wages and Salaries

"People are paid wages for doing just the things they are told to do.

"People are paid salaries for doing whatever is up to them to do, without being told.

"The difference in words is small, but the difference in dollars is amazing."

The Nose and the Grindstone

"The man who keeps his nose perpetually to the grindstone—

"Despatches a great deal of unimportant work.

"Produces a very little good work.

"Is called 'steady'.

"Losses his perspective.

"Narrows his mind.

"Sharpens his temper.

"Warps his personality.

"Is placed on a dusty shelf with others of his kind.

"The man who keeps his nose perpetually to the grindstone gets his nose rubbed off."

There's no "hand-power" in modern heating

. . . thanks to the Appliance Industry

Americans have *many* reasons to be grateful to the appliance industry. For much of the ease, the convenience and the healthfulness of modern American life is due to modern American appliances. Delco Products is proud of its part in this great industry. Many of the first models of famous appliances were powered by especially developed Delco Motors. And as these products have been consistently improved, so Delco Motors have been made ever more efficient and dependable. Built in sizes from 1/8 to 50 h.p., Delco Motors are quiet, compact and designed to fit the requirements of the particular application. Delco Products Division, General Motors Corporation, Dayton, Ohio.

DELCO PRODUCTS DAYTON, OHIO

insist on genuine Marlo products

MARLO = HEAT TRANSFER Since 1925

Kalamazoo Stove Makes New Staff Appointments; Whitcomb Is Gen. Manager

KALAMAZOO, Mich. — Appointment of Clyde C. Whitcomb, vice president of Kalamazoo Stove & Furnace Co., to the position of general manager has been announced by Arthur Blakeslee, president.

It was announced that J. J. Hilmert and H. C. Hawk have been appointed assistants to the general manager and that Donald J. Devereaux has joined the company as sales manager for metropolitan areas. Devereaux, formerly in charge of sales in the Chicago area for Florence Stove Co., will make his headquarters in Kalamazoo's Chicago office.

Blakeslee said the appointments of Whitcomb, Hilmert, and Hawk will make it possible for him to give full attention to his activities as president.

Whitcomb joined the company's sales department in 1928. He operated a branch store of the company before being promoted to division manager of New York State. Here he opened and supervised the operation of 40 retail stores.

In 1938, he was recalled to Kalamazoo to organize and operate a department of sales training.

In 1939, Whitcomb was promoted to general sales manager. He became vice president and works manager in 1940 of the company and in 1945 was elected a member of the board of directors. He was appointed assistant general manager in 1946.

In his new position, Hilmert will coordinate the activities of the sales, advertising, and sales promotion departments and the general office. He joined the sales department of the company in 1933 and successively occupied the positions of assistant sales manager, sales promotion manager, and director of advertising and sales promotion.

Hawk's new duties will be in liaison capacity with the plant and production personnel. He joined Kalamazoo's engineering department in 1946, working on the company's post-war retooling program. Following this he became assistant superintendent in charge of jobbing production and sales at Plant 2. Later he became production control manager at Plant 1.

Locker Plant Sold; Cold Storage Firm Incorporates In Lincoln

LINCOLN, Neb. — The Coryell freezer locker plant here has been sold to Merrill R. Reller, Lincoln attorney, and City Products Corp. of Lincoln has been incorporated in another deal to operate a cold storage business with $1,000 capitalization. Incorporators of the latter firm are C. G. Dederick, K. R. Gregory, and J. R. Broadway, all of Chicago.

Reller purchased the Coryell Commercial Center, 41st and Cornhusker, which includes the locker plant, for $65,000 from L. L. Coryell & Son.

Artificial Foods Displayed In Refrigerators and Freezers Make Selling Easier, Dealer Discovers

DENVER—Nothing will sell home freezers and refrigerators more effectively than presenting both as they will look in the customer's home, packed with appetizing food, according to Stan Hoffman, major appliance buyer at Daniel's & Fisher, department store here.

"We started out on this plan in an experimental way, and found it so effective that we show all models stocked with artificial foods" it was pointed out. "Now, whenever a customer opens up any type of refrigeration appliance in the department, she is bound to get a better impression merely by seeing the foods within."

To make the most of this type of presentation, Daniels & Fisher arrived at an "average" refrigerator's contents, and thus stocks each box shown with meat, cheese, milk, several bottles of soft drinks, bowls of "leftovers" with plastic covers as well as a few cans of beer, a pitcher of milk, some vegetables, and several paper wrapped packages of luncheon meats.

Home freezers are packed with large and small sized frozen food packages, with freezer-paper wrapped meat packages, out of season foods, etc., to simulate the way the freezer would be used in the average home.

"Nearly every woman comments appreciatively about it," it was summed up. "And sales come a lot easier."

Dissolve Bell-Clark Partnership

ALLENTOWN, Pa.—R. L. Clark, formerly a partner in Bell-Clark & Co., wholesale distributor, has announced the dissolution of that partnership as of Dec. 31, 1948.

Clark said that he is now the proprietor of Clark Distributing Co. which distributes refrigerators, ranges, and other electrical appliances in the eastern part of Pennsylvania.

ASRE Data Booklet Covers Packaging of Frozen Foods

NEW YORK CITY—Frozen food packaging is thoroughly discussed in the latest Application Data Section issued by the American Society of Refrigerating Engineers, 40 W. 40 St. here.

Designated AD 34-R, this four-page booklet "Protective Packaging of Frozen Foods" covers such subjects as factors influencing the permeability of materials and airtightness of packages at low temperature, packaging and wrapping materials, effect of packaging on quality of food, etc.

The pamphlet, originally published in 1944, has been extensively revised and additional material added to bring it up to date.

The original booklet was written by William Rabak, U. S. Department of Agriculture. The extensive revisions have been made by J. G. Woodroof, food technologist at the Georgia Agricultural Experiment Station.

Copies may be obtained from ASRE headquarters for 35 cents each.

Home Freezer Sales Up 75% In Nashville

NASHVILLE, Tenn.—A 75% increase in the sale of home freezers during December as compared with November highlighted the local major appliance picture, statistics released by Nashville Electric Service show.

For the same period, electric range sales were up 9% and refrigerator sales gained 15%.

Water heater sales showed a sharp drop from November due mainly to greatly reduced selling by contractors, housing projects, plumbers, and others. Dealer sales were only slightly under the November figure.

Total unit sales for these appliances in December numbered 360 ranges, 326 refrigerators, 219 water heaters, and 21 home freezers.

Pattenden Files Name In N. Y.

BUFFALO—A business name has been filed in the Erie County Clerk's office for the Pattenden Appliance Co., 1981-83 S. Park Ave., here, by Robert Greene and J. C. Pattenden.

IT'S A FACT!

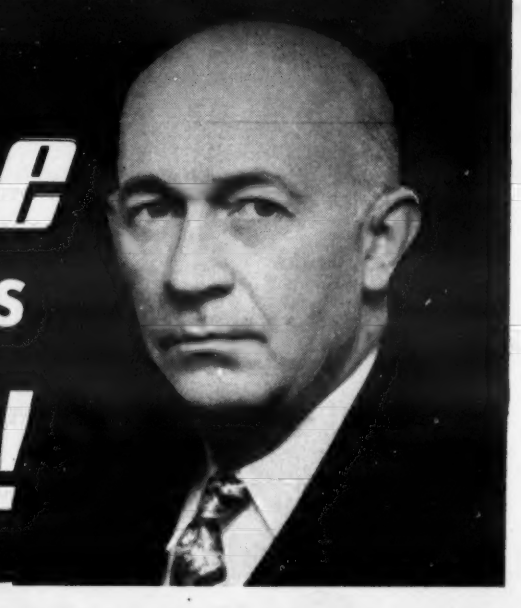
Display and Demonstration Do It!

12 Deepfreeze

TRADE MARK REG U. S. PAT. OFF.

HOME FREEZERS

SOLD IN 5 DAYS!



OVER 1500 potential Deepfreeze home freezer customers attended demonstrations at Sanger Bros., Inc., Dallas, Texas, according to Fred R. Gamble, major appliance buyer.

SANGER BROS., INC., used two newspapers to promote the demonstrations. Special radio announcements included interview with Deepfreeze home economics representative. Deepfreeze home freezers were featured prominently in window displays at the two Sanger stores. Direct mail to preferred customers swelled attendance at these sales-making demonstrations!

GROUP DEMONSTRATIONS Invite Customer Interest!

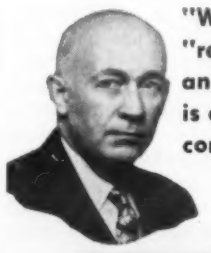
DISPLAYS Whet Customer Appetite!

SANGER'S ANNEX

HOW DEEPFREEZE HOME FREEZER DEALERS SELL...

As a Deepfreeze home freezer dealer, you can use the same sales materials that Mr. Gamble utilized. You can put 18 different types of selling aids to work. And you have a complete line of home freezers to sell—real features to talk about—the best known name in the home freezer business. Investigate—Today!

DEEPFREEZE DIVISION • Motor Products Corporation
North Chicago, Illinois



"We, in Texas," says Mr. Gamble, "recognize a good brand name and the name plate 'Deepfreeze' is a brand we are happy to have corralled!"

The FIRST and FINEST! STILL YOUR BEST BET!

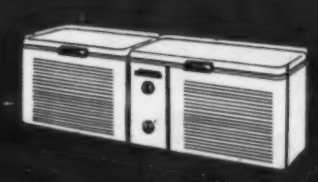
Deepfreeze—America's Fastest Selling Home Freezer and Refrigerator Line

DeLuxe Model C-10 Holds more than 350 pounds of assorted food. Price, delivered and installed—$449.50

DeLuxe Model C-6 Holds more than 210 pounds of assorted food. Price, delivered and installed—$269.95

Model B-10 Holds more than 350 pounds of assorted food Price, delivered and installed—$389.50

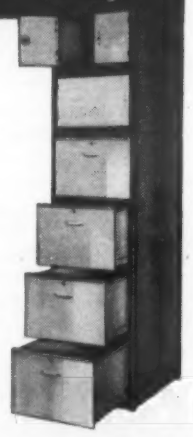
Model B-6 Holds more than 210 pounds of assorted food. Price, delivered and installed—$239.95



DeLuxe Model C-18 Holds more than 612 pounds of assorted food. Price, delivered and installed—$599.50

FROSTAIR Duplex 7 cubic ft. refrigerator, 3½ cubic ft. home freezer combined in one beautiful cabinet. $588.00 in Zone I. $10.00 higher in Zone II.

ASE FROZ-N-FOOD LOCKERS



Designed to provide these profit-making advantages to the locker plant operator—

- Variety of types and sizes.
- Easy to rent.
- Easy and inexpensive to install.
- Easy and inexpensive to maintain.
- Sturdy and durable construction.

Drop us a postcard for additional details.

Obtainable in Black and White or Green and Ivory...

ALL-STEEL EQUIPMENT INC.
250 Griffith Avenue • Aurora, Illinois

see your "DETROIT"
WHOLESALER
for
Expansion Valves
Solenoid Valves
Controls
"DETROIT"
2810
DETROIT LUBRICATOR COMPANY General Offices: 5900 TRUMBULL AVENUE DETROIT 8, MICHIGAN
Division of American Radiator & Standard Sanitary Corporation
Canadian Representatives—RAILWAY AND ENGINEERING SPECIALTIES LIMITED, MONTREAL, TORONTO, WINNIPEG
"Detroit" Heating and Refrigeration Controls • Engine Safety Controls • Float Valves and Oil Burner Accessories
"Detroit" Expansion Valves and Refrigeration Accessories • Stationary and Locomotive Lubricators
"DETROIT"
EXPORT DEPARTMENT—Box 218, Ridgefield, New Jersey

DEALER INSTALLATION PROBLEMS

NARDA Panel Sees Need To Observe Electrical Code

CHICAGO—Appliance retailers on a panel which considered installation problems during the recent annual meeting here of the National Appliance & Radio Dealers Association urged cooperation with electrical contractors and plumbers and adherence to the national electrical code.

The panel was composed of Simon Halle, Halle's, Colorado Springs, chairman; John Freeze, Freeze & Kausch, Milwaukee; C. H. Roney, General Electric Co.; and V. G. Killian, Winnetka, Ill., a director of the National Association of Master Plumbers.

Freeze, who is local chairman of the Milwaukee committee on installations of major appliances, said there are two steps dealers can take in seeking a solution to this problem:

"1. Cooperation with and from the electrical contractors and plumbers. Namely, an interdependence program.

"2. A concerted effort to by-pass both plumber and contractor, whereby we would strive to develop an appliance specialist to care for our installations. . . ."

Elaborating on the first possibility, Freeze said:

"Up until the advent of World War II, the appliance dealer had spent many dollars for promotional work and many hours of labor doing missionary work to promote the sale of electric ranges, dishwashers, sinks, dryers, etc. We feel that after being a major factor in developing this market we are entitled to the fruits of our labor.

"The plumber and electrical contractor had cooperated 100% prior to the war, but now have decided that they alone are entitled to the sales of this equipment. If they persist in that attitude, step number two is the only alternative.

EXPERIENCE IN MILWAUKEE

"In Milwaukee, a committee of dealers has been meeting with a like committee of electrical contractors to try to iron out the problems we are confronted with. To date, we have accomplished a great deal toward that goal. However, we received somewhat of a set-back when the local power company discontinued a sales bonus plan of $35 to help defray the cost of electric range and water heater installations. . . .

"As to the plumbers, to date no effort has been made to settle the problems there, which problems are equally as important as the wiring. . . ."

Should efforts at cooperation fail, development by dealers of an installation specialist would be a "must," Freeze asserted.

"We cannot and will not stand by and see a business that we developed over these many years torn from our rightful possession because a few selfish individuals assume it is theirs and theirs alone. . . .

"We are not and do not intend to be a part of any plan or pressure group with designs or intentions of breaking down the gains the plumbers' association or electrical contractors' association have made. We wish to cooperate with them . . . and pray they will do likewise. . . ."

CODE NOT RESPONSIBLE FOR HIGH COSTS

After presenting background material on the national electrical code, Halle cited an example to illustrate his opinion that adherence to the code is not responsible for high building costs.

"Within 60 days past," he said, "we were asked by a Colorado Springs architect to bid on a very modern six-room house with basement. We were to provide for the installation of a complete electric kitchen, laundry, automatic heating plant, and generous use of other electrical conveniences.

"This dream house was to be provided with the following electrical details: 62 outlets of all types, special circuits for electric range, laundry, electric sink, heating plant, and even provisions for future circuits.

"Here are the figures: Cost of complete house, $20,000; cost of wiring in rigid metal conduit, $800; cost of wiring in flexible metal conduits, $650; cost of wiring in non-metallic cable, except service, $600.

"Inspection of these figures will indicate that the amount that could be saved by the substitution of the poorest methods of wiring in place of the best from the standpoints of safety, flexibility, and future expansion of the use of electrical conveniences would be $200, or 1% of the cost of the residence.

"As far as the national electrical code is concerned, any of the three methods are permissable. Choice or restriction of the method of wiring to be used in a given locality is a function of the police powers. . . .

REMODELING NOT SO ROSY

"It is true, that in remodeling older houses, the picture is not always so rosy. However, I am certain that no electrical contractor will question my statement that some considerable share of the electrical costs involved in remodeling is to be charged fairly to modernization of the structure as a whole rather than entirely to the installation of some specifically new appliance or appliances involved in the remodeling.

"Our classic example of what I mean is the cost involved in installing an electric range in a house that has had its wiring installed prior to the regulation requiring outdoor meters and adequate grounding.

"Well over half the costs involved in such an installation can be charged fairly to modernization occasioned by the necessity to bring the obsolete service up to date rather than to the new range purchased and its installation."

Urging dealers to work "through the code, not around it," Halle concluded: "Let us not be a party to a short-sighted destruction of minimum codes for electrical safety and adequacy. . . ."

In his talk, Roney listed three steps retailers must take before they can offer planned delivery and installation.

"1. Establish a working agreement with the necessary tradesmen if they are not already on the payroll.

"2. Where practical, plan on using the same installation crew on each job until such time as the volume warrants multiple crews.

"3. Take advantage of manufacturer and distributor training schools in order that these men may thoroughly understand the equipment they are working on.

AFTER THE INSTALLATION

"After the necessary arrangements have been made for planned installation," he continued, "someone must assume the responsibility for checking over the equipment completely after the installation is made to make sure that it is functioning normally and to give a complete demonstration to the customer.

"Even though the customer has seen a demonstration in the store, it is still necessary to go over this demonstration again in her own kitchen or laundry. This will establish her confidence in the appliance and give her a good sales story to present to her friends and neighbors.

"Following the installation and home demonstration of the equipment, the retailer has one more obligation to the customer—that of providing prompt, courteous, and complete service. Obviously, this involves a source of replacement parts and a serviceman trained to render courteous service in an efficient manner. In those cases where this procedure has been followed, sales have increased with great rapidity.

"From these conditions, it would seem obvious that the dealer must make his own choice, either to be in or out of this type of business. There is no half-way. . . ."

A PLUMBER'S VIEW

Killian, a merchandising plumber, pointed out that his firm—in following through the sale of an electric dishwasher—makes a home survey in most cases to determine just what is involved in installation.

He said this may involve a new waste and vent line or just lowering or relocating same, a new radiator in a new location or just relocating the old radiator or cutting down the old radiator to fit a new location, and checking on the supply lines and the source and adequacy of the hot water.

"If the manufacturer feels that there is sufficient markup in the unit to take care of the survey necessary for installation," he stated, "then that part should be passed on to the one who makes it. Otherwise, it may be cheaper for the customer to buy the unit directly from the one who installs it."

NEEDS MERCHANDISE SALES

Killian told the dealers that "a shop like mine that depends on and works for merchandise sales is not the proper place to come for an immediate installation. . . . A careful survey by the retail store of the available master plumbers who are not so much interested in the sale of merchandise as they are in the installation would be a better place to go."

Merchants who approach the installation problem with an open mind can find a satisfactory plumber with whom to work, he said.

"You see," he stressed, "three people must profit through this sale—the customer through a well-installed unit and both the retailer who sells the unit and the one who installs it . . . or they will soon cease to be a working team."

Get the big three working for you—
Get KELVINATOR!

You'll start off every installation in high gear when you choose Kelvinator condensing units for the job. They give you the all-important "big three." For they're priced *competitively* . . . they perform *dependably* . . . and they bear *a name that customers know means quality!*

Kelvinator's range of five open type models . . . from ¼ to 1 horsepower . . . are precision-built, precision-tested to insure top-notch performance. Their dependability is known by refrigeration men the country over—just as the name Kelvinator itself spells the finest in refrigeration design and quality manufacture. It's the name that always *sells* . . . always *satisfies!*

Choose Kelvinator for your next new or replacement installation—and *know* you have the right condensing unit for the job. All models are available for immediate shipment. Just call your nearest Kelvinator Distributor or Zone Office. Kelvinator, Division of Nash-Kelvinator Corporation, Detroit, Michigan.

Model 0-100
1 H.P.

Model 0-75
¾ H.P.

Model 0-50
½ H.P.

Model 0-33
⅓ H.P.

Model 0-25
¼ H.P.

Kelvinator—of Course!

DEPEND ON KELVINATOR FOR ALL YOUR REFRIGERATION NEEDS

Available from 1/2 to 10 H.P.
CLEANABLE
DOUBLE-TUBE
COUNTER-FLOW
WATER-COOLED
CONDENSERS
Write for literature
Halstead & Mitchell
BESSEMER BLDG.
PITTSBURGH 22, PA.

Klock, of G-E, Named Section Chairman for Credit Group Meeting

BLOOMFIELD, N. J. — The National Credit Men's Association has announced the appointment of C. G. Klock of the General Electric Co.'s air conditioning department as program chairman of the Plumbing, Heating, Refrigeration, and Air Conditioning Section for the NACM national convention.

Klock, manager of credits and collections at the G-E air conditioning department headquarters, will arrange a special program of interest to plumbing, heating, refrigeration, and air conditioning representatives for May 17 during the annual meeting of the association at Atlantic City, May 15 to 19.

Also named to the program committee are: vice chairman, John G. de Pass of the National Radiator Co.; E. H. Figush of the Grabler Mfg. Co.; Howard C. Hartman of the L. J. Mueller Furnace Co.; W. A. Polk of the Rheem Mfg. Co.; and D. F. Runyon of the Carrier Corp.

The program planned for the May 17 meeting of the Plumbing, Heating, Refrigeration, and Air Conditioning Section will include talks by outstanding men in financial and business circles.

Carrier Corp. Completes $54,456,394 In Sales During '48 Fiscal Year

SYRACUSE, N. Y.—Carrier Corp. has reported a net profit of $2,710,412 or $4.19 per common share for the fiscal year ended Oct. 31, 1948.

This compared with $2,272,774 or $3.44 per common share for fiscal 1947.

The corporation completed sales in the amount of $54,456,394, and booked $52,676,015 of new orders. The comparable figures for fiscal 1947 were $52,910,590 and $47,686,249.

The earnings, sales, and new business figures constituted all-time high fiscal year records for the corporation.

Carrier's backlog of unfilled orders totaled $17,823,885 as of Oct. 31, 1948, compared with $21,668,140 a year earlier.

"Virtually the entire backlog consists of so-called contract business," Carrier said. "This includes both installations by the corporation and sales of larger equipment direct to users or their representatives. Practically all orders from distributors and dealers are now being handled on a current basis."

The annual report revealed that during November and December, the first two months of the present fiscal year, $8,045,167 of orders were booked, as compared with $8,308,587 in the corresponding period of fiscal 1948.

Admiral Names Distributor for Parts of Minnesota, Wisconsin

CHICAGO — Franchising of the Great Lakes Industry, Inc., 1003 Minnesota Ave., Duluth, Minn., for the distribution of Admiral appliances for 14 northern Minnesota counties as well as two northwestern Wisconsin counties has been announced by W. C. Johnson, vice president in charge of sales of Admiral Corp.

Erick Johnson is president of the firm.

Compact, fully automatic, marvels of efficiency in sizes up to 10-tons.

TYPHOON AIR CONDITIONING CO., INC.
Division of Ice Air Conditioning Co., Inc.
794 UNION STREET • BROOKLYN, N. Y.

TASTY TIE-IN

Ice Cream Case In Bakery Dept. Helps Both Sell

DENVER, Colo.—A four-compartment, self-service ice cream case, mounted between two glass display cases filled with baked goods has boosted sales in both ice cream and bakery products, according to the management of the Miller Bakery, located at Broadway and Center Aves. here.

Sales girls have been instructed to suggest ice cream with pie, cake, or cookies sold to bakery customers. The management claims that approximately half the customers accept the suggestion and purchase either a pint or quart of packaged ice cream.

Eight different flavors of ice cream and a variety of syrups, such as chocolate, caramel, or butterscotch, are sold from the ice cream case. Customers who drop into the store just to purchase ice cream, many times even purchase baked goods before leaving, the store management said.

West Coast Groups To Build $10,000,000 Mart In Los Angeles

LOS ANGELES—The Los Angeles Furniture Mart is working to construct a $10,000,000 mart building here that will provide more than 2,000,000 sq. ft. of floor space for tenants, A. V. McDonald, managing director of the mart, has announced.

A non-profit organization, the Los Angeles Furniture Mart Building Co., Inc. is handling the new building, he said.

An option has already been taken on four acres of land at Washington Blvd., Broadway, and Hill Sts.

The new structure will actually be twin 13-story buildings connected by a central administrative tower. Only half of the project will be built initially with the remaining space to be used for temporary parking facilities, McDonald said.

Financing will be by real estate loan and stock subscription by manufacturers, retailers, wholesalers, and the public, he declared. No date has been announced for the beginning of construction.

Once completed, the structure is expected to provide an annual income of approximately $3,000,000 from rentals and concessions.

One of the features of the new building will be a 1,000-seat auditorium.

George A. Holder Elected President of Virginia RSES

RICHMOND, Va. — The Virginia State Association of the Refrigeration Service Engineers Society has announced that George A. Holder of Lynchburg has been elected president for the coming year.

Other recently elected officers are R. H. Israel of Norfolk, vice president; Ralph W. Lampie, of Richmond, secretary-treasurer; and Robert Templeton of Roanoke, sergeant-at-arms.

The association, which contains 200 members from the Richmond, Norfolk, Newport News, and Roanoke RSES chapters, will hold its annual convention in Roanoke on March 19, Lampie announced.

Mitchell Is Sales Head Of Fedders-Quigan Unit Air Conditioner Division

BUFFALO—Appointment of Frank A. Mitchell as sales manager of the unit air conditioner division of the Fedders-Quigan Corp. was announced recently by Edmund R. Walker, vice president. Mitchell succeeds E. A. Bonneville, who recently resigned.

Frank A. Mitchell

Mitchell was formerly sales manager of the Deepfreeze Corp., and also was with Bendix Home Appliances, Inc.

Contractor Announces Location

PROVIDENCE, R. I.—The Delbro Co., air conditioning and electrical contractor here, has announced that its office, showroom, and warehouse is now located at 471 Plainfield St.

This is the second of a series of advertisements outlining the advantages of "Freon" refrigerants.

WHY "FREON" REFRIGERANTS ARE WIDELY APPROVED

OUTSTANDING CHARACTERISTICS OF "FREON" REFRIGERANTS

- NONTOXIC
- NONFLAMMABLE
- NONEXPLOSIVE
- NONCORROSIVE
- ANHYDROUS
- PURITY
- QUALITY
- ACID FREE
- NARROW BOILING-POINT RANGE
- AVAILABILITY

The nonflammable . . . nonexplosive qualities of "Freon" refrigerants are additional reasons why these refrigerants are extensively used. They are suitable for all types of commercial, industrial, and household air conditioning and refrigeration systems.

The safety factor of "Freon" refrigerants obviously is one of prime importance. It is a protection. It provides assurance to owners that no damage or injury to people or pets, foods, fabrics or finishes will result, even in the event of serious breakdown or leakage. "Freon" refrigerants are also nontoxic . . . harmless, odorless . . . yet they may be quickly detected with the aid of a halide lamp.

Because these outstanding characteristics of "Freon" refrigerants fully comply with safety requirements of all building codes and civic ordinances (they are rated among safe refrigerants listed in Group 1 of the A.S.A. B-9 Code), they are ideal for installations that serve the public . . . hotels, theaters, offices and the like.

The qualities that distinguish "Freon" refrigerants are the product of stringent, laboratory-controlled manufacturing methods. The process is an intricate one. And to assure uniform quality, exacting tests are periodically made throughout production operations. This care and attention to manufacturing details results in a product which contributes to the efficient, economical performance of today's compact air conditioning and refrigeration equipment.

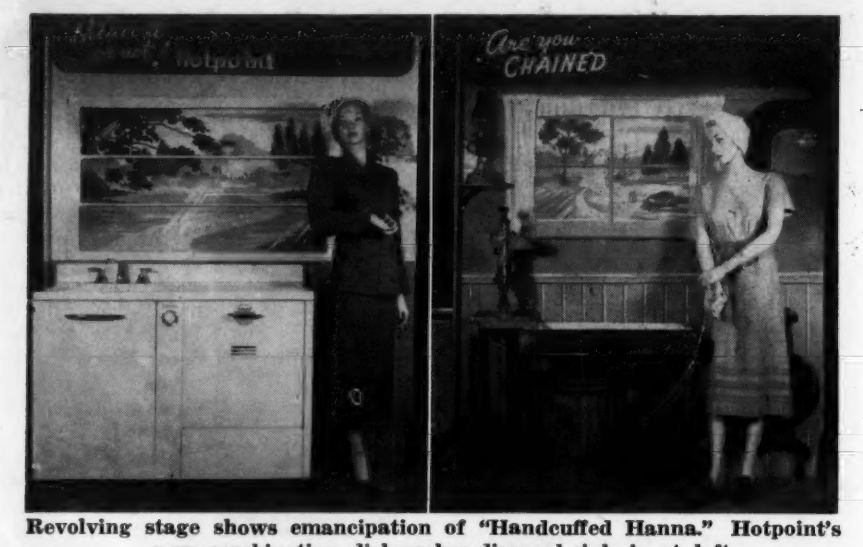
There is a "Freon" refrigerant for every requirement in the field and engineers nation-wide unhesitatingly recommend equipment designed to provide the advantages and benefits of these safe refrigerants.

Kinetic Chemicals, Inc.
Tenth and Market Sts., Wilmington 98, Del.

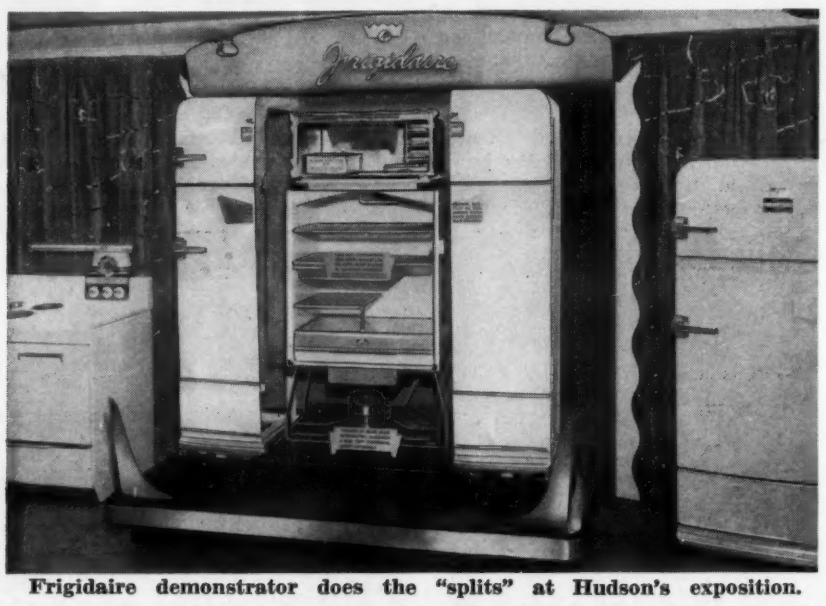
KINETIC
REG. U. S. PAT. OFF.

FREON *SAFE* REFRIGERANTS

"Freon" is Kinetic's registered trade mark for its fluorinated hydrocarbon refrigerants and propellents.



Revolving stage shows emancipation of "Handcuffed Hanna." Hotpoint's new combination dishwasher-disposal-sink is at left.



Frigidaire demonstrator does the "splits" at Hudson's exposition.

Spectacular Displays, Showmanship Center Attention on Appliances at Hudson's Show

DETROIT — Showmanship and spectacular major appliance displays were the order of the day at the 16th annual housewares exposition staged recently by the J. L. Hudson Co., large department store here

Fewer brands of appliances were shown in the two-week exposition than last year, but the companies participating were given more space for their displays and did a much more showmanlike job, a major appliance department spokesman declared.

Manufacturers and distributors who put on exhibits were lavish in their use of theatricals to draw crowds around their displays. Hotpoint, General Electric, and Frigidaire, particularly, went all out in this respect.

Hotpoint put on the largest number of exhibits which were placed in several strategic locations in the 10th floor show area. In the very center it had a large revolving stage that contrasted the average kitchen of 1930 with the all-electric kitchen of 1949.

Another revolving stage displayed "Handcuffed Hanna" and the new Hotpoint sink and dishwasher. Other mechanically moving exhibits contrasted the 1907 model electric range, one of the first made, with the latest pushbutton model, showed a cutaway version of the interior of an electric range, marched cardboard penguins bearing signs with selling slogans written on them around

Stage Revolves To Show 1930 Kitchen . . .

* * *

a home freezer, and pictured the operation of an automatic dishwasher.

Hotpoint also had its gold plated 2,000,000th range displayed in a street level window along with its two-door refrigerator. A company home economist used the department's permanent kitchen for cooking demonstrations during the first week of the exposition. A Frigidaire home economist took over the second week.

General Electric brought its "Walkie-Talkie" refrigerator and "waltzing range" to the exposition.

Frigidaire, using duplicates of the exhibits it had prepared for the General Motors show in New York City, showed an electric range that automatically operated its controls, moved surface units, and pulled out drawers and shelves while a back panel lit up explanations of what went on.

In another exhibit, Frigidaire displayed a large cold wall refrigerator that splits open to show the refrigeration system. A third display put an automatic washer through its paces and pointed that the washer's Rapidry cycle spins clothes at 60 m.p.h.

Kelvinator used a revolving stage to show its transparent refrigerator. Bendix and Monitor kept their washers constantly operating.

Easy exhibited a mechanical washer of 1877 vintage along with its newest automatic model on a revolving stage. Easy, Monitor, and Ironrite had demonstrators working their latest model ironers.

Estate put on a puppet show and cooking demonstrations to attract crowds to its range exhibit.

Hoover crowded its space with an 11-ft. tall vacuum cleaner with 30-in. nozzle. It worked, too.

The Detroit Edison Co. used a "magic mirror" to emphasize that "the picture is changing to electric water heating."

Hudson people termed this one of the best shows in the 16 years the store has been putting on these expositions, and credited the distributors and manufacturers with a high degree of cooperation in working with the store. They stated that the improved quality of the exhibits was due in great part to the fact that the manufacturers and distributors are now in a better position to supply merchandising aids and exhibit materials.

The store advertised the exposition in advertising placed in all three daily newspapers, on two of the store's three radio programs, on a television show, and in enclosures sent out with monthly bills to charge customers, and in several of the store's 51 large display windows.

* * *

. . . And the All-Electric One of Today

BEAUTY STOPS CUSTOMERS • FEATURES SELL CUSTOMERS

TO APPRECIATE ITS SHEER *Beauty* YOU'LL HAVE TO SEE

Amana's NEW FREEZER-REFRIGERATOR MODEL FR-9

. . . with a Market all its own

Capture the best of the market with beautiful, feature packed new Amana Freezer-Refrigerator Model FR-9! The new Amana Freezer-Refrigerator delivers extra value you can see and gives extra impact to your sales message. Result—extra sales! This, plus complete Amana Freezer line—one for every need—and Amana's full mark-up policy gives Amana dealers an amazing profit-making opportunity.

Check your line for '49. See Amana. Compare quality for quality—feature for feature. Send coupon for details.

DISTRIBUTORS!

REFRIGERATION DIVISION
AMANA SOCIETY
AMANA, IOWA

Pioneer specialists in low temperature refrigeration with a century old tradition of fine American craftsmanship.

FEATURES YOU CAN SEE
Two in one—Freezer-Refrigerator!

• Separate doors—one for refrigerator, one for freezer • Generous capacity refrigerator plus freezer compartment with a capacity of 65 pounds of frozen food • No defrosting of refrigerator compartment necessary since no frost accumulates • Foods stay moist—no drying out in high humidity refrigerator • Jumbo size vegetable bins • Quick release ice cube trays • In-a-door temperature indicators • Individual temperature controls on each compartment • Chip proof chrome scuff plate • Two-tone gold and silver effect chrome hardware • 5 year warranty on complete refrigeration system.

DEALERS—SEND THIS COUPON

REFRIGERATION DIVISION
AMANA SOCIETY, Amana, Iowa
Send full details of Amana's profit making dealer proposition
NAME OF STORE.....
ADDRESS.....
CITY.....ZONE.....STATE.....
DEALER'S NAME.....

Air Cooled CONDENSERS

KRAMER

KRAMER TRENTON CO. Trenton 5, N. J.

Continuous Ice Making Process Requires No Brine, Cans, or Labor, Inventor Tells ASME

NEW YORK CITY—A new continuous process for ice making that generates cakes without brine, ice cans, or labor, was described here to The American Society of Mechanical Engineers by John R. Watt, assistant professor of mechanical engineering at the University of Texas.

In this method, a machine using direct expansion freezing cylinders extrudes hard white ice in continuous columns suitable for automatic severing into cakes.

Watt, who developed the process, pointed out that whereas conventional ice making freezes it from the outside, this new process freezes it from the inside outward.

CENTER IS FORMED FIRST

The center is formed first, and then successive layers form around it to bring it to proper size. He compared it to the dipping process of candle-making or the growth of a snowball rolling down hill.

"The 'incremental film' principle allows ice formation of approximately 10 lbs. per sq. ft. of freezing surface per hour at 5° F. suction pressure, or about 30 times greater than ice-plant practice," Watt stated.

"The pilot commercial 1-ton machine has one moving part and requires floor space 3 ft. square. It generates cakes 12 by 15 in. of any length. Operating costs are low. The ice is suitable for railway and truck icing, fisheries, dairies, farms, and air conditioning."

The largest buyers of ice are the seasonal food-transportation industries, Watt explained. Since seasonal ice must store easily, this market uses cake ice almost exclusively.

"Today these industries find themselves dependent upon the slow ice-can system with its large and increasing capital and labor outlays," he said.

OLD SYSTEM DEFIES IMPROVEMENT

"The very nature of this process discourages improvement. Faster heat transfer in the can is impeded by the ice itself, while colder brine causes cloudiness and cracking of the ice. Thus any cheapening of can ice seems difficult."

Watt explained that to overcome this, several continuous ice-generating systems are now finding use.

"These fast processes manufacture ice at remarkable savings but may incur storage problems," he said. "Ice flakes and snow ice require double space, while briquettes often freeze together in storage. Consequently no rapid freezing system yet competes where storage is significant. Furthermore, flakes and briquettes are not as satisfactory in refrigerator cars as cake-ice."

In 1943, Watt began experiments to develop a continuous process for making cake-ice. The first tests investigated the shearing of ice from steel, and proved it practicable to shear ice intact from a submerged freezing surface, to freeze water between the two to form a new ice layer bonded to the old and to repeat the process layer by layer to generate solid blocks of desired size and shape.

Basically, the machine was composed of a tank of water in which a double-walled tapered freezing cylinder was mounted big end up and cooled by direct expansion. A perforated ram reciprocated vertically in the lower end of the cylinder. When run rapidly, this machine formed nesting circular ice shells about 1/32 of an inch thick, like nested paped cups.

RAM SHEARS ICE CORE

"With the ram in low position and the machine filled with water, an ice core was frozen in the tapered cylinder," Watt explained.

"When this was solid, the ram mechanism was started, periodically shearing the ice core from the cell walls and lifting it intact about ⅛ inch.

"Since both core and cylinder were tapered, lifting the ice opened a thin annular void entirely around it. Suction and capillary action filled this with water from the reservoir while the ram returned to its original position.

"Each successive new layer of ice—called the 'incremental film' for want of a better term—froze integrally to the one before," he continued.

"Each cycle therefore added new ice below and around the core, forming a column that extruded step by step upward out of the cylinder."

In 1948 the 1-ton ice-making machine was designed by Watt as a pilot commercial plant and built by the Modern Supply Co. of Austin, Texas.

This machine has a tapered rectangular inner cylinder which extrudes an ice column 12 by 15 in. in cross section. The square ram, operated by a hydraulic cylinder, is the only moving part on the freezing machine.

"Thus far, no ice cutoff device has been installed," Watt said. "Several automatic arrangements seem applicable, and no difficulty is anticipated in severing 25, 50, 75, or 100-lb. lengths for discharge by chute. Similarly, no special difficulties are seen in the construction of multicylinder ice plants."

He described the ice cakes as "hard and solid, but not brittle. Although visible to the eye, the laminations are permanently bonded together and the ice melts, chips, and fractures like ordinary ice."

On the basis of the tests made to date, Watt said the following economies are probable under the extrusion process: building-space requirements are reduced about 80%, equipment is cheaper than a brine tank and cans, there is one auxiliary not several, there is no foreseen corrosion problem, labor costs are reduced, existing compressors may be used, installation costs will be low, and losses due to refrigeration and radiation will be reduced.

"The process should be applicable wherever white ice is acceptable," Watt said. "With one half of America's ice consumed by refrigerated cars and trucks, fishing boats, dairies, drink boxes, farms and the like, there should be wide markets. Since both investment and operating cost are low, extrusion equipment should appeal to many ice plants faced with replacement or expansion problems."

Frigidaire Official Cites $Billion Ice Cream Sales At Factory Sales Meeting

DAYTON—The national sales organization of Frigidaire Div. of General Motors heard W. F. Switzer, the company's commercial sales manager, disclose that "the ice cream industry has developed into one of the country's billion-dollar-per-year businesses" when he unveiled a new line of ice cream cabinets during a special factory meeting here early in 1949.

Switzer, speaking to more than 150 Frigidaire commercial refrigeration sales managers and ice cream cabinet representatives from across the nation, said that the ice cream industry produced more than 550 million gallons in 1948, alone, an average of 3 gallons per capita. He added that a billion-gallon year is not "improbable" in times to come.

He pointed out that the extensive development of the ice cream industry has created a challenge for the builders of modern storage and dispensing equipment.

"Equipment manufacturers are aware of the bigger-but-smaller design trend currently sweeping the country. Commercial low-temperature cabinets, like household refrigerators and home freezers, must be designed with more storage capacity," he explained. "Yet at the same time they must not occupy more floor area than models now in use."

He declared that the new Raymond Loewy-designed Frigidaire cabinets have up to 50% more storage capacity than comparable sized models, made possible by an under-the-cabinet condenser and a new refrigeration compressor arrangement.

The Dayton meeting keynoted a nationwide series of new ice cream cabinet introductory field meetings in 45 principal cities. The new line will be shown to more than 2,500 key ice cream manufacturers, serving over 250,000 of the nation's retail outlets.

Lawrence To Manage M-H Charlotte Office

MINEAPOLIS — L. F. Lawrenc has been promoted to branch manager of the Charlotte, N. C., office of the Minneapolis-Honeywell Regulator Co., Thomas McDonald, vice president, announced recently.

Lawrence succeeds Karl Selden, Jr., who has resigned to become sales manager of Textile Shops, Spartanburg, S. C., designer and manufacturer of equipment for textile mills.

Lawrence, who attended Georgia Tech, joined the industrial instrument division of the Honeywell company in 1935. After a training course, he was assigned to the Atlanta office as a field engineer and in 1941 was transferred to the sales staff in the same office.

In 1947 he was made senior district representative in Knoxville, Tenn., a position he held until his latest promotion.

J. T. Pitts will succeed Lawrence at Knoxville. Pitts has been district representative in Durham, N. C.

R. T. Waits, who has been serving on the sales staff of the Charlotte branch, has been promoted to district representative in Greenville, S. C.

Carrier Gets Contract for 2 American Passenger Ships

NEW YORK CITY—A contract covering complete air conditioning and refrigeration of two of the newest passenger vessels to be built in the U. S., has been signed by Carrier Corp., with the shipbuilding division of Bethlehem Steel Co., Carrier's marine department announced recently.

The ships, costing $23,415,000 each, and as yet unnamed, are being built for American Export Lines, Inc., at Bethlehem's Fore River Yard, in Quincy, Mass.

Constructed under an agreement with the U. S. Maritime Commission, the new liners will have an estimated 20,000 gross tons and 30,000 displacement tons; an over-all length of 683 feet, breadth 89 feet, and draft 30 feet. With a speed in excess of 25 knots, they will be the fastest passenger vessels operating under the American flag.

For each vessel, Carrier will supply two marine-type centrifugal refrigeration machines which will serve the air conditioning systems for the public rooms, staterooms, and crews' quarters.

In addition, Carrier will furnish refrigeration equipment, including reciprocating "Freon" marine-type compressors, for extensive cargo and ship's stores refrigeration systems.

Ordered last August, the ships are the first new passenger vessels to be built by a private operator in a decade. Accommodating 972 passengers in three classes, they will operate in the line's Mediterranean service between New York, Genoa, and Naples. Each ship could carry 5,000 troops if necessary.

Miller In Advertising Post At Koch Butcher's Supply

NORTH KANSAS CITY, Mo.—A. Ray Miller has joined the refrigerator division of the Koch Butcher's Supply Co. as assistant to the advertising manager, Sam Glass, the company has announced.

Miller returns to the midwest after several years with the Federal government in Washington. Serving in the administrative field, one of his main jobs was to tighten up the administration of scattered field operations from central headquarters, and reduce administrative overhead through use of technical manuals.

Miller will probably utilize his background to prepare sales manual and bulletin material for the Koch field organization, Glass said.

Baker Ice Appoints Coral Gables Outlet

SOUTH WINDHAM, Me.—Baker Ice Machine Co., Inc. has announced the appointment of the Giffen Roofing Co., of Coral Gables, Fla., as distributor of all Baker products in the southern part of that state.

The Giffen Roofing Co. has been active in insulating, ventilating, and air conditioning work in the Miami area since 1934. Expansion of the refrigeration and air conditioning division of the company is now in progress, under the direction of J. W. Hendricks, Jr.

The company is now prepared to lay out, install, and maintain any air conditioning or refrigeration job covered by the Baker line.

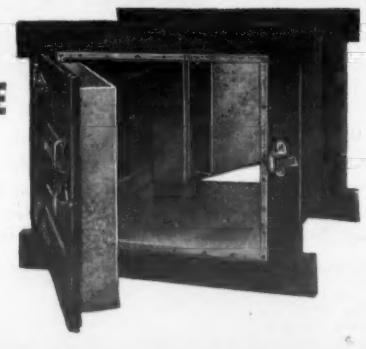
You can cut
REFRIGERATION COSTS
When Handling
CANS, CRATES, KEGS

CAN AND CRATE PASSING DOOR

The Auto Close doors swing open readily and close automatically when the cold storage doors open. This checks the inrush of warm air and saves refrigeration. The door can be fitted into a conveyor system or used with its own roller conveyor.

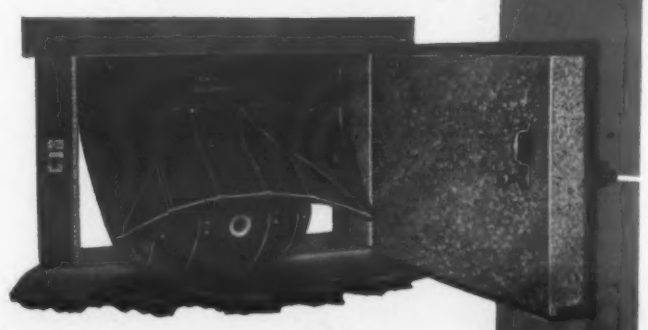
ICE CREAM CAN PASSING VESTIBULE

The vestibule is equipped with a cold storage door at each end. Maximum loss of cold air is limited to the volume of the vestibule because either door is always closed whether loading or unloading. Vestibule holds six to nine cans in various arrangements.



KEG PASSING DOOR

A flexible light weight insulating curtain of moulded material prevents the loss of cold air when the door is open. The movement of the keg lifts the curtain without shock or abrasion as it passes. It immediately drops back in place and air movement is cut off.



These Jamison-Built Doors permit the speedy passing of cans, crates, boxes, packages or kegs in and out of the refrigerated space. Each of the methods illustrated is particularly well suited to the temperatures and type of container. The loss of cold air and the entry of warm air during the time containers are moved in and out of refrigerated storage rooms is held to a minimum. The resulting savings in refrigeration costs can be substantial.

JAMISON
HAGERSTOWN, MARYLAND, U. S. A.

Standard types of Jamison-Built doors are available for a wide range of temperatures and applications. For special requirements doors can be built to your specification regardless of size, character or duty.

Write for new catalog that gives helpful information on cold storage door selection.

JAMISON COLD STORAGE DOOR CO., HAGERSTOWN, MD
The Oldest and Largest Builder of Cold Storage Doors in the World

Products for 1949 Air Conditioning Market Unveiled at Chicago

The "heat pump" year-round air conditioning system continues to get plenty of attention in the industry, and this crowd is watching a demonstration of General Engineering & Mfg. Co.'s packaged "Miracula" heat pump model, which occupies a net floor space of 6.3 sq. ft. This model is still being field tested, and will not be commercially available until later in the year.

H. G. Williams and C. W. Williams experiment with the rotatable outlet grille in the Fedders ¾-hp. window room conditioner. At the left can be seen part of a new line of water coolers which were introduced by Fedders-Quigan.

Featured by the W. B. Connor Engineering Co. was its line of Kno-Draft adjustable air diffusers along with Dorex air purification equipment. In the foreground is the apple storage purification unit which was introduced about a year ago and has gone into more than 100 apple storage plants. This unit is also being adapted to pear storage applications, where the company believes it will prolong storage life considerably.

Fan blades and impellers for all types and sizes of air moving equipment were displayed by Torrington Mfg. Co. Here D. H. Hindenach of Minneapolis, discusses some of the products with Archie Doty of the Torrington company.

Ed Robinson (second from right) of White-Rodgers Co. demonstrates workings of a control to Tom Davenport; Gene Marchand, president, Sarco, Ltd., Canada; and H. C. McKenzie of Sarco.

Improved Models Are Ready for the Field

Packaged 'Miracula' Heat Pump on Test

The "Miracula" heat pump of the General Engineering & Mfg. Co. was the only heat pump at the show, and a demonstration of its operation drew good-sized crowds.

The Miracula models exhibited are not at present being produced for general sale, as they are still being field tested, it was explained by company officials.

The model shown uses a 5-hp. Gemco 2-stage compressor. A control system is provided which can reverse the system from the cooling to heating cycle, or vice versa, in two minutes.

The conditioned air outlet on the Miracula unit can be fitted with a grille so that it can be installed in a commercial establishment much like a packaged air conditioner.

Dimensions of the unit are 6 ft. 3 in. high, 2 ft. deep, and 3 ft. 2 in. wide, representing a net floor space of 6.3 sq. ft.

The Miracula unit, it was explained, can utilize either air or ground as a source of heat, depending on climatic conditions. Where the ground is used, from 1,000 to 1,500 ft. of coil buried 12 to 15 in. below the frost line, is utilized to provide the heat source.

New Pressure-Limiting Valve for 'Freon' Jobs

On display for the first public showing at the Automatic Products Co. booth was a new pressure-limiting expansion valve for air conditioning applications, a "Comfort Master" furnace draft control, and an "Oilifter" fuel oil pump.

A-P's new valve, designated as No. 216, is a self-equalizing type for "Freon-12" ratings of 3.75, 7, or 11 tons, and is just now going into production. Its pressure-limiting feature stops operation when the pressure reaches a pre-determined point.

Although built as an external equalizing valve, it can be readily changed in the field to an internal equalizing type, the manufacturer states, adding that the disc-type seat minimizes the possibility of freeze-up in the valve. Made for flange or sweat mounting, the valve is also available with a multi-outlet if desired.

Thanks to its liquid-charging feature, it can be mounted in any position and any ambient, A-P claims, adding that it represents the company's first attempt to get into the packaged air conditioner field of application.

To be sold as a complete package, the thermostatically controlled Comfort Master furnace draft unit features a motor and gear pump operating in an oil bath.

When the thermostat calls for heat, the motor starts and the gear pump forces oil into a piston which lifts an arm connected to the furnace draft. The motor continues to operate at slow speed until the thermostat is satisfied. Then the motor stops, dropping the oil pressure, and a spring forces the draft arm to the "closed" position.

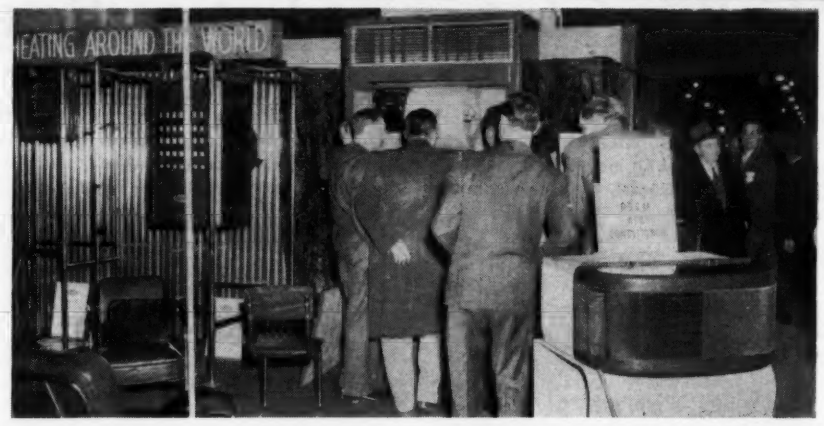
For firing up the furnace, pressing a button on the control will keep the draft open for five to seven minutes, after which the device goes back on thermostatic control. A high-limit switch is also included in the control.

On this and pages 15, 16, 22, and 23 are presented descriptions and pictures of the exhibits at the Heating & Ventilating Exposition that will be of major importance to readers of Air Conditioning & Refrigeration News.

Imperial Brass Shows Valves, Tools, Pumps

Addition of more sizes to its line of refrigeration and bottled gas fittings was announced at the show by Imperial Brass Mfg. Co., which had on display its broad line of fittings, tools, and accessories for the refrigeration, heating, and plumbing field.

For the latter, Imperial also featured its flush valves and an operating model of its floatless sump pumps.

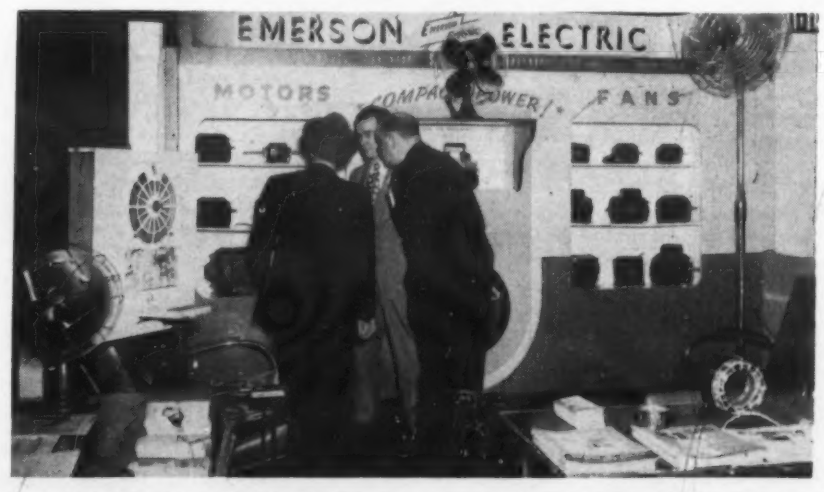


Visitors crowd around a packaged store conditioner model with its working parts exposed, in one corner of the extensive Carrier exhibit. In the right foreground is a Carrier window room air conditioner.

A big Texas delegation was on hand at the show, and the members were busy promoting attendance at the 1950 Heating & Ventilating Exposition, which is to be in Dallas. These two Texas visitors, Charles Howard and Ralph Segall of College Station, are giving close inspection to a room air conditioner in the Remington exhibit.

Crowds flocked into the booth of Automatic Products Co. where a variety of control equipment was on display, including a brand-new 216 pressure-limiting "Freon-12" expansion valve for air conditioning applications. Rated at 3.75, 7, and 11 tons, the valve is self-equalizing, and although built as an external-equalizing valve, it can be readily changed in the field to internal equalizing. Also shown by A-P for the first time was an Oilifter pump for oil-burning equipment, and a Comfort Master automatic furnace draft control claimed to have some unique features.

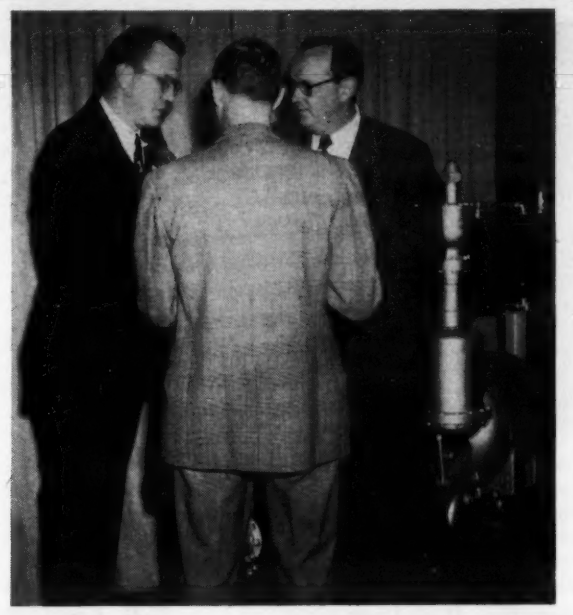
Biggest items on display at the booth of Acme Industries were evaporative condensers and "Bio-Cold" units which now have a double-dip galvanized finish to increase life. Also emphasized was the company's line of water chillers and condensers, which Al Newton (center), recently appointed director of sales, is discussing with C. F. Porter and Sidney Anderson of Airtemp.



Arthur Turcotte of Two Harbors, Minn. gets in a huddle with Floyd Weang and J. D. Waterbury of Emerson on some of the company's line of motors and ventilating equipment.

C. F. Wood (right), Frigidaire air conditioning sales manager, demonstrates how attractively a floor-type room air conditioner, designed for remote installation of the unit, can be finished. W. F. Switzer, Frigidaire commercial sales manager, is getting the demonstration.

Redmond "Micromotors" have a wide variety of uses in the air conditioning, ventilating, and heating fields, as was indicated by the generally crowded conditions at the Redmond booth. Visitors in right foreground are stooping over to inspect a motor operating under water.



In a serious discussion huddle with a Chrysler Airtemp refrigerating system as a background are W. C. Newberg (left), president of Airtemp, and T. U. Cowger and Milton Porter. The refrigeration unit was part of a large exhibit displaying models in Airtemp's broad line for the air conditioning field.

Frigidaire Reveals Conditioner 'Insides'

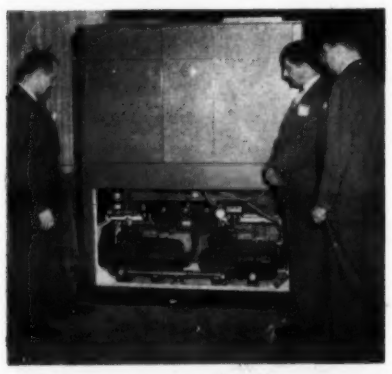
Packaged air conditioning equipment, including store and window models equipped with transparent windows to show their works, were highlights of the display staged by Frigidaire Div., General Motors Corp.

Occupying the corner spot was the 5-ton cut-away store conditioner operating at slow speed, but there was also another store unit, a 3-ton conditioner, on the floor. The window models displayed were of ½ and 1-ton capacities.

A remote floor-type air conditioner for homes and offices was shown hooked up to a compressor to illustrate how such an installation is made. There also was displayed a 9-ton central system air conditioner.

Representative short and long series Multipath cooling units were shown also, plus an operating bottle-type water cooler (a rarity at this exposition), which found great favor with thirsty visitors.

Twin Condensing Units Mark Ameritherm Model



Two semi-hermetic 5-hp. condensing units under pressure control feature the new AC-1000 air conditioner introduced at the show by American Thermal Industries, Inc. Compactness is another feature of the unit, which measures 6 ft. 1 in. high, 26 in. deep, and 63 in. wide. J. J. Kramer (left) and E. Feinberg (right) of the company show the unit to Leonard L. Radner, Theater Air Conditioning Corp., Detroit.

On-the-Job Adjustment In 'Aerofuse' Diffuser

On-the-job adjustment of air delivery is the big feature of the "Aerofuse" air diffuser introduced by Tuttle & Bailey.

This new type Aerofuse is designed to block off—partially or completely—the outer passage of the diffuser. An auxiliary ring which slides on an inclined plane can be manually raised or lowered to vary the effective area, which governs the flow of air from the diffuser. When in closed position, the ring completely seals off outer air passage, reducing the effective area by about 40%.

Because of design changes it has been possible to reduce the neck diameters of the Aerofuse and thus, for a given effective area, the neck diameter is considerably smaller than that of previous models.

Spring-Mounted Attic Floor Fan Is Shown

A spring-mounted attic floor fan in a packaged unit was the innovation shown by Chelsea Fan & Blower Co.

Evaporative Cooler Sets In 8-Inch Window Spot

Intended for installation in windows, a new blower-type evaporative cooler takes up only 8-in. height in windows and thus does not obstruct the view, claims the manufacturer, Comfort Products Corp. of Dallas, Tex.

Rest of the unit, which measures 24 by 30 by 30 in., hangs out the window, but the water and operations controls are mounted on the grille section in the window opening so adjustments can be made within the area being cooled. Rated at 2,000 c.f.m., this model (No. 20-E) contains 8 sq. ft. of filter area employing either aspen wood or the new long-fiber Fiberglas.

One water connection and one electrical connection are required for this cooler, which is provided with adjustable, slotted water troughs claimed to permit even water distribution even though the unit may not be exactly level. Sliding panels permit fitting the cooler to varying window sizes larger than the 28-in. minimum width.

Fedders Show Conditioner Units and Water Coolers

Besides introducing its new ¾-hp. console-type air conditioner—introduced a short time ago—and displaying improved models of its standard window-type conditioner, Fedders-Quigan Corp. also showed for the first time three new water coolers.

Compact and pleasing exterior lines mark the air conditioners and the water coolers, which include a bottle-type cooler and two bubbler models. One bubbler model is a flash-type cooler rated at 4-gal. per hour capacity; the other is a 10-gal. tank type. Hermetically sealed condensing units are employed on all models.

Airtemp Equipment for Wide Range Displayed

A wide variety of equipment for the air conditioning field was shown in the exhibit of the Airtemp Div. of Chrysler Corp., demonstrating Airtemp's claim of manufacturing products to handle air conditioning jobs of any type or size.

Featured were the 3 and 5-ton packaged store conditioners, a condensing unit assembly for a central station air conditioning installation, and a "cooling tower" water conservator. Large colored photographs were shown of a window-type room air conditioner.

A miniature model of the "Trion" electric air filter system was being exhibited in the booth, thus supporting the story that Airtemp is tying in this product with its line.

Easy Installation Is Claimed for 'Electromaze'

Under the trade name of "Electromaze," the Air-Maze Corp. introduced for the first time an electrostatic dirt precipitator which is claimed to offer several advantages, such as being easier to install and costing less.

Ionizers and collector plates are designed in the form of individual cells fitted with handles permitting easy removal and flexibility of arrangement. The cells are 12 3/16 in. high, 26½ in. deep, and come in three widths: 4⅜, 8 3/16, and 12 in. The power pack has the same dimensions as the smallest cell.

Savings of 20% in depth while providing 24% greater collector plate area are claimed for this new design, which also provides built-in current regulation said to overcome normal line voltage fluctuations in the 115-volt supply. Electrical connections are claimed to be simplified because the power pack is internally located and the same voltage (10,000 volts d.c.) is used for both ionizer and collector sections.

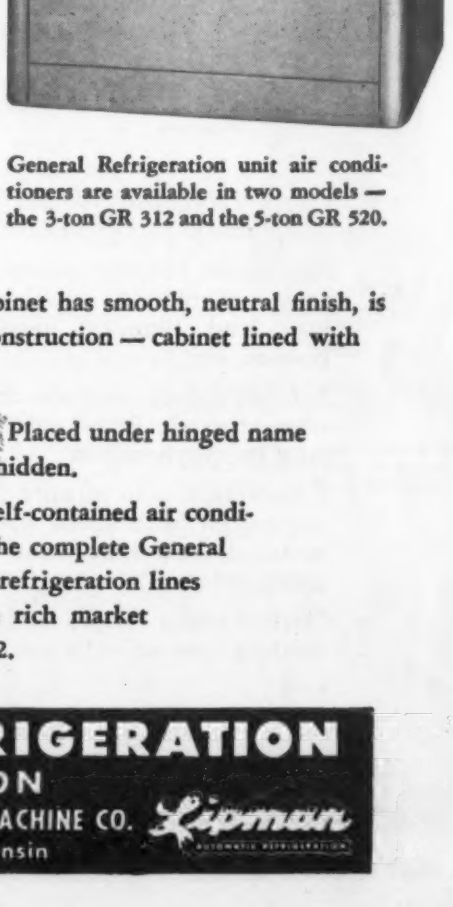
Filter cells are constructed of aluminum alloy, except for the diffuser plate and ionizer-collector plate, which are cadmium-plated sheet steel, and ionizing wire holder, which is treated zinc alloy die casting.

Cleaning of the cells and wiring can be accomplished with water under pressure, or by manual cleaning after the cells have been removed from the frame, the company says.

Industrial Humidifier

In addition to its floor, table, and industrial model humidifiers, Walton Laboratories also exhibited its "fan lamp" models which provide both illumination and air movement.

New self-contained AIR CONDITIONERS give you these features that SELL



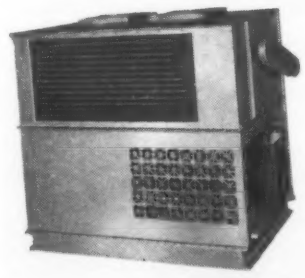
DIRECTIONAL DISCHARGE GRILLE All-aluminum grille can be easily adjusted to direct cooled air at various angles. Large blower capacity.

YEAR 'ROUND USE Provides summer cooling and dehumidification, all-year ventilation and filtration, and can be used for winter service with heating coil and humidifier.

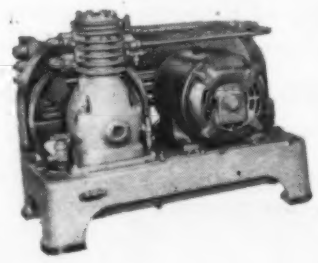
EASY TO INSTALL, TO SERVICE Entirely self-contained, unit is easily installed, can be moved to new location with other fixtures. Servicing is simplified — all controls, valves and parts are readily accessible.

MANY ECONOMY FEATURES Has permanent, cleanable air filter — heavy-duty Lipman compressor that keeps working, gives more cooling per kilowatt of power — cleanable, counter-flow condenser to provide low operating pressure and high efficiency for low cooling water consumption.

General Refrigeration unit air conditioners are available in two models — the 3-ton GR 312 and the 5-ton GR 520.



COMPLETE GR AIR CONDITIONING LINE includes the duct-type Model 10-4000 above, and the Model 301 condensing unit below.

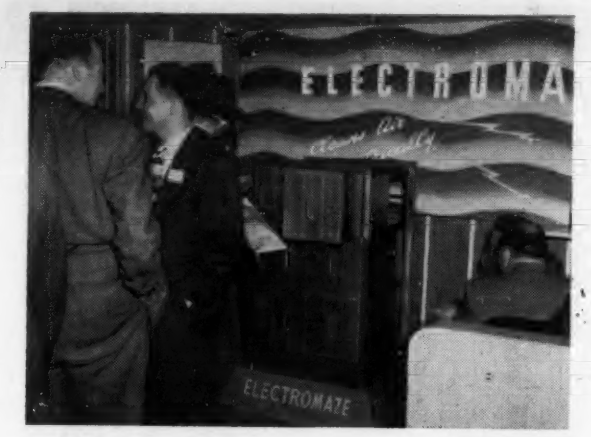


LOOKS WELL ANYWHERE Attractive cabinet has smooth, neutral finish, is easily cleaned — rust-resistant sheet steel construction — cabinet lined with ½-in. rigid sound deadening insulation.

CONVENIENT, CONCEALED CONTROLS Placed under hinged name plate on front of cabinet, convenient but hidden.

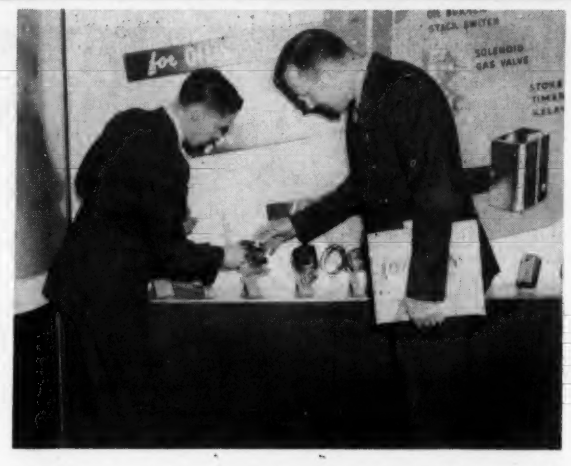
Send for literature on these new GR self-contained air conditioners. Ask also for full information on the complete General Refrigeration air conditioning and Lipman refrigeration lines — the advantages in handling them, the rich market potentialities. Write today to Dept. AR12.

GENERAL REFRIGERATION DIVISION
GR
YATES-AMERICAN MACHINE CO.
Beloit, Wisconsin
Lipman



The "Electromaze" unit, a new electrostatic dirt precipitator, was introduced by Air-Maze Corp. Ionizers and collector plates are designed in the form of individual cells fitted with handles permitting easy removal and flexibility of arrangement.

Biggest display of room air conditioners was by Remington. Blonde and mahogany finishes in both floor and window models were displayed. Here Herbert Laube (second from right) and W. H. Peters describe a model to Emory C. Perry, Chicago contractor. Second from right is Mark Watkins of Remington.



Presenting a display of gas-heating controls, which marked its entry into this field, Penn Electric Switch Co. also featured oil burner and refrigeration items. Here E. A. Price of Penn explains a limit and fan control to Frank G. Kruchten, J. Henderson & Sons, Bedford, Ind.

Remington Has Complete Room Conditioner Line

The most extensive line of room air conditioners on display was that of the Remington Air Conditioning Div. of Remington Corp.

Described in detail elsewhere in this issue, the broad line of units ranging across the front of a long exhibit space included floor-type models in 1¾-hp. and 1¼-hp. air-cooled models, and 1½-hp. and 1-hp. water-cooled models, window units in ¾-hp. and ½-hp. sizes, and the "Climate Controller" chassis floor type without decorative cabinets for those who prefer to have custom enclosures designed, or where decorative finish is not desired.

In the regular models a choice of rich mahogany or honey blonde avodire finish is offered.

M-H Electronic Control Assemblies Replaceable

An extension of its line of electronic control systems for air conditioning and heating systems marked the Minneapolis-Honeywell showing.

These M-H electronic control systems are now being constructed with standard components, and are designed in such a way that whole subassemblies are replaceable in service operations, something in the manner of hermetic and semi-hermetic refrigeration systems.

Among the electronic control combinations shown were indoor-outdoor controls, combustion safety controls embodying the principle of flame rectification, and pneumatic automatic reset controls.

Also shown by M-H was an "electronic psychrometric chart," developed more or less as a laboratory experiment for rapid calculations of relative humidities and dewpoint conditions.

R. L. Nelson of Heating Assurance Co., Spokane, Wash., is shown details of the "Vikimatic" ¾-ton window room conditioner by Bob Lassig of Viking Mfg. Co.

Refinements Made In Precipitron Cleaners

Refinements in the Westinghouse "Precipitron" type of electric air filter were emphasized in the Sturtevant Div. of Westinghouse exhibit.

One result of design refinements has been to lessen the obstacles to the incoming air flow, thus reducing the resistance to air flow through the Precipitron.

In promoting the features of the Precipitron, Westinghouse is underlining the fact that the top voltage is 13,000 volts, and this is out of the range of creating ionization problems.

New Cabinet and Fan Design by Buffalo Forge

A redesigned VPC conditioning cabinet using standard Aerofin coils and an HVA fan were among the products displayed by Buffalo Forge.

The new fan combines design principles of both centrifugal axial flow types to achieve smooth performance curves of horsepower, static pressure and noise level characteristics, the manufacturer claims. The wheel is constructed of brazed aluminum blades and center piece mounted on an extruded hub. A feature of the bell-shaped, die-stamped housing is that it can be set for any 45° or 90° discharge angle by removing four cap screws on each support.

Owens-Corning Shows Cooler Pack, Plan for Filters

Owens-Corning Fiberglas Corp. exhibited its new evaporative cooler pack for use in the construction of evaporative coolers, which can be easily fabricated and installed, and requires no shaping.

The exhibit also promoted the "progressive replacement" plan to cut filter cost on the Owens-Corning line of replaceable-type filters.

'Turnotrol' by Anemostat Offers Air Supply Control

Introduction of the "Anemostat Turnotrol" was a feature of the Anemostat Corp. exhibit. The Turnotrol consists of a series of turning vanes mounted in a frame, and it is so designed that, whether the vanes are fully or only partially open, they will deflect the supply air into the take-off at a 90° angle equally over the entire diameter of the take-off. Fully closed, virtually no air will pass into the take-off.

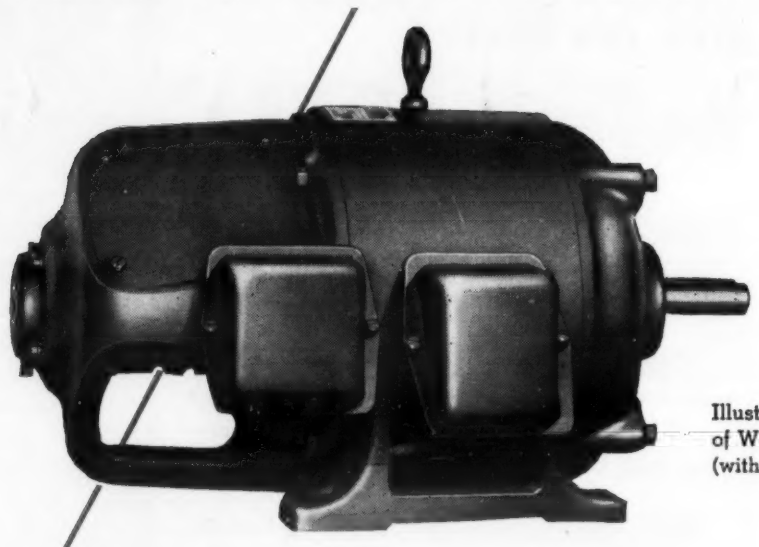
The turning vane assembly of the Turnotrol is mounted to a frame attached to the underside of the supply duct by sheet metal screws. An adjusting or regulating screw rod extends through the opening in the center cone of the Anemostat air diffuser which can be turned with a screw driver. Positive volume control in any degree desired is obtained by raising or lowering the vanes.

The Worthington 1949 model packaged store conditioner with a number of design and construction improvements is the subject of this earnest conversation between K. N. Critchfield, P. H. Shaw of Worthington, and E. T. Pellingson, Oklahoma City consulting engineer.

The new Anemostat "Turnotrol" which combines the functions of turning vanes and a splitter damper, and is used with an Anemostat diffuser, is investigated by D. R. Wilde of Williams, Gritton & Wilde, Salt Lake City.

Century

WOUND ROTOR MACHINES
Are Available for *MANY* Industrial Uses . . .



Illustrating Century Line of Wound Rotor Machines (with covers).

For
Compressors • Cranes • Hoists •
Bending Rolls • Refrigerators • Bridges •
Synchro-Speed Drives • Printing Presses •
High Frequency Current

Century Polyphase Wound Rotor machines are adaptable to many applications that require

1. Adjustable varying speeds or reversing direction of rotation — such as bending rolls, fans and blowers, newspaper printing presses, etc.
2. Synchro-speed, multiple drives to be used when two or more industrial operations must be synchronized.
3. Converters — to supply high frequency current for high speed electric motor-driven machines and hand tools.
4. High starting torque with low starting current — for such applications as cranes, hoists, lift bridges, turn tables and car dumps.

Century Electric Wound Rotor Machines are built in sizes up to 400 horsepower and are available in open protected or splash proof frames.

Century builds a complete line of electric motors in a wide range of types and kinds, in sizes from 1/6 to 400 horsepower.

Specify Century motors for all your electric power requirements.

Popular types and ratings are available from factory and branch office stocks.

Century C MOTORS

CENTURY ELECTRIC COMPANY • 1806 Pine St. • St. Louis 3, Mo.

Offices and Stock Points in Principal Cities

CE-603

The largest display at the exposition was that of the Trane Co., which exhibited many examples of its broad line of heating and cooling equipment, including the recently announced Unitrane system of multi-room year-round air conditioning. Above is the rear view of the fan and coil cabinet employed in this new system.

Careful Refrigeration Nets Grower Firm High Off-Season Sale of Pre-Packaged Corn

Direct-to-Market Distribution Accomplished In 3 Days

TAMPA, Fla.—By getting sweet corn under refrigeration within a few minutes from time it is picked, and shipping it in mechanically refrigerated highway transports direct to retail store refrigerator displays, Paul B. Dickmann farms here is proving that highly perishable sweet corn can be successfully distributed and sold in packages.

Paul B. Dickmann, head of the firm, is distributing Florida corn, grown in Ruskin township a few miles from Tampa, to 20 cities, including Baltimore, Philadelphia, Cinncinati, Louisville, Grand Rapids, St. Petersburg, Memphis, St Louis, Chicago, Detroit, Toledo, Ft. Wayne, Miami, Washington, and Atlanta.

The corn is packaged in neat 30-cent cartons, containing five small ears of three large ears, and rushed to market in low-temperature highway vans.

285,000 EARS SOLD LAST YEAR

The successful program, entered into by Dickmann with the Florida State government and the Florida Grower's Association, resulted this year in the sale of 285,000 ears of Florida corn in the aforementioned communities.

It is proving a practical means of marketing Florida's heavy spring and winter crops at a time when other parts of the country have little or no production.

With careful timing and the use of low temperature refrigeration from packaging machine to the housewife, the usual chemical starch-sugar change which spoils sweet corn flavor has been averted.

The Dickmann organization has determined that corn sugar changes to starch rapidly above 50° F. while holding it at between 32 and 38°. providing the process is started almost immediately after picking. Held at the lower temperatures the corn will stay sweet and tasty over long periods.

To accomplish this, the company has built a new $75,000 refrigeration and packaging plant on the Dickmann farm at Ruskin. The plant is situated in the center of a 1,000-acre farm, 450 acres of it in bantam corn which has produced an average per acre of 600 dozen ears, or 200 cases.

For refrigerated delivery, even the small 3 and 3½-in. ears are picked, with maximum flavor, and packed five to the carton.

SPLIT-SECOND TIMING

The process is timed down to the second. Only 30 minutes are allowed for picking the corn, hauling it by tractor to the packing plant, and inspecting it.

Another 15 minutes necessarily is allowed for processing, including shucking, washing, and size grading of the ears. During this time more than 40% of the weight of each ear is removed.

From the moment they arrive in the packing plant, the ears move by conveyor, falling off the end into a vat of cold water which reduces field temperature down to 35°, while at the same time giving each ear a final wash.

After a few minutes in the cold water, the "fixed" corn is switched to other conveyors. These carry them through automatic cellophane machines, which fill up shipping cases.

From there the sweet corn moves into a 40 by 30-ft. refrigerated walk-in cooler, which is controlled tightly to between 30 and 32° F. Two 5-hp. condensing units, one a standby, provide the refrigeration.

A minimum of five hours of refrigeration is standard. Most of the corn averages seven or more hours from entering the refrigerator to transfer to the mechanically refrigerated trucks.

The corn package, of a handy size, is ventilated by small holes to prevent condensation and expel natural gases while undergoing the first refrigeration step.

ONLY 3% SHRINKAGE LOSS

During the entire marketing operation, Dickmann has found, properly packaged and refrigerated corn shows a total shrinkage loss of only 3%; as against more than 20% average for loose corn in baskets.

The plant production is shipped almost entirely in mechanically refrigerated transports, which maintain 30 to 35° F. temperatures even over the long run to the Chicago and Baltimore markets.

Cases are stacked to permit maximum circulation of chilled air. Blower type dome cooling units are used in both single truck units and semi-trailers which are hauling the majority of shipments.

Where it has been possible to prearrange it, Dickmann trucks have delivered the sweet corn directly to supermarkets and foodstores in each city where ample self service or storage refrigeration is on hand to protect it during the last step in marketing.

This cuts down the number of hours required from field to housewife by from four to seven hours in most instances. In setting up his markets, Dickmann has been careful to concentrate only on these which he feels have ample refrigeration for ultimate protection.

While the delivered retail price per carton is higher than for unprotected corn, the Florida grower has found high favor in the cleaned ears ready for cooking. Everywhere pre-packaged corn has been introduced, particularly where it is unavailable for many months of the year, sales have come quickly.

The corn requires only 72 hours from shucking to store delivery under the present schedule.

The high degree of success obtained in corn has led the Florida organization to set up similar production plans for tomatoes, broccoli, cauliflower, and other vegetables.

Timing and safe refrigeration, Dickmann belives, will do away with the tremendous loss and waste of Florida's lush spring and winter crops altogether.

Self-Serve Luncheonette Aids Employes In Store

LINCOLN, Neb.—Hovland-Swanson, high-style women's specialty store here, has completed remodeling the basement to provide a modern self-service luncheonette for employes.

The installation includes a large-size Kelvinator refrigerator, a mechanically refrigerated soft drink cooler, electric cooking equipment, and a combination sink and counter.

Year-round air conditioning is provided from the central system serving the four-story-and-basement structure. The new luncheonette will accommodate about 50 persons at one time, according to president Clarence E. Swanson.

Brown Instrument Names Mgrs. of 4 Field Offices

PHILADELPHIA—Appointment of four new managers of eastern sales offices has been announced by William H. Steinkamp, field sales manager for Brown Instrument Div. of Minneapolis - Honeywell Regulator Co.

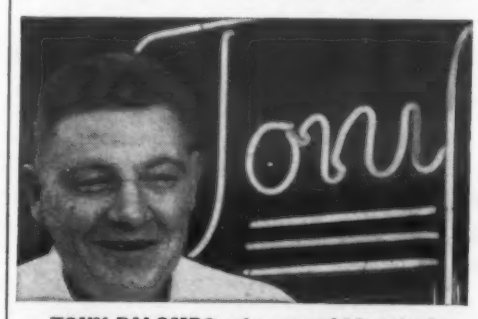
Warren W. Matlack has been named industrial manager of the New York City branch to succeed O. B. Wilson, now regional sales manager for the east, central, and southeast regions of the company. Matlack has been with Brown for 18 years and has been district manager at Albany, N. Y. for several years.

Devon W. Fryback succeeds Matlack at the Albany office. He was formerly industrial manager at Hartford, Conn. and has been with Brown for 21 years.

D. Lyle Russell moved from the Boston office to take over at Hartford.

Herman Hoyler has been named industrial manager of the East Orange, N. J. district office. Hoyler has been with Brown Instrument for 11 years.

TED INMAN, popular and busy bartender at Tony's Westown Bar, 7645 Fenkell, Detroit, Michigan, says, "Since we started to sell nickel beer our volume has jumped plenty, but Temprite has never once let us down."



TONY PALOMBO, who opened his neighborhood tavern in 1935 with a Temprite Cooler, says, "When our customers start crowding the bar, our good old Temprite keeps just as cool as a cucumber. Every glass of beer is perfect, right down to the bottom of the barrel".

. . . yet every glass is cooled to perfection with TEMPRITE

One of the most delicate of all beverages is beer. Careful handling from the brewer's kettle to the tavern tap is a must.

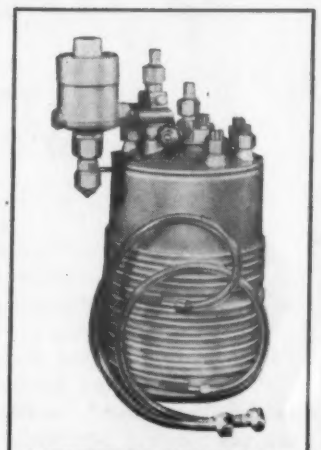
If beer is too warm, the foam runs wild and profits run down the drain.

If beer is too cold, the head is too thin and profits run down the customer.

Beer temperature must be right . . . from the beginning to the end of the keg . . . and that is why Temprite has long been standard equipment at the busiest bars. For no matter how heavy the demand, no matter how frequently the tap is opened during rush periods, Temprite-cooled beer is *right*. Every glass is cooled to perfection. Every glass has brilliancy, flavor and body. Every glass has a rich, creamy collar of the right depth.

It is for reasons like those above that refrigeration men everywhere are pushing trouble-free Temprite beer coolers for steady, substantial profits.

Drop us a card today for details.



8 TEMPRITE MODELS feature easy installation, all stainless steel coils.
Heavy duty model above will cool 2 kinds of beer plus soda and plain water at the same time.

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ESTABLISHED 1929
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These attractive new "P-H" sliding door, self-serve cases will save labor and help you increase profits! Equipped with adjustable-tilt, individually fluorescent lighted shelves for greater eye appeal. Available in 5 models with display areas from 23 Sq. Ft. to 52.5 Sq. Ft. and storage capacities from 9.8 Cu. Ft. to 20.7 Cu. Ft.

New All Black Porcelain FLORIST'S CABINETS

Designed for remote application, the new "P-H" Florist's Cabinets provide maximum display area with minimum floor space. Beautiful black porcelain interiors and exteriors — adjustable, chrome edge, glass shelves — fluorescent lighting. Available in 2, 3 and 4 door models.

CHOICE OF 50 REACH-IN CABINETS
25 ALL-PORCELAIN—25 NEW STAINLESS STEEL MODELS

Puffer-Hubbard now offers the widest selection of top-quality Reach-In Cabinets on the market. Electric welded steel frames and finest construction throughout. Available in solid or glass door models with Thermopane Triple Glass, they range in size from 20 Cu. Ft. to 90 Cu. Ft. — Both self-contained or remote control models — available with, or without, Ice Maker coils.

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They'll Do It Every Time . . . . By Jimmy Hatlo

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JUNE
M-M-MH--NO. I GUESS WE BETTER THINK IT OVER A LITTLE LONGER. WE'LL LET YOU KNOW...
IT PAYS TO GO SLOW ON NEWFANGLED GADGETS.! COME ALONG HENRY!
JIMMY HATLO
BUT WHEN THEY FINALLY MADE UP THEIR MINDS TO BUY, THEY WANTED IT INSTALLED IN SIX SECONDS..
NOVEMBER
OKAY! SOLD! NOW HOW SOON DO WE GET IT? HOW SOON? WE GOTTA HAVE IT RIGHT AWAY! UNDERSTAND?
TOMORROW? WE CAN'T WAIT UNTIL TOMORROW! SET IT UP TODAY, OR THE DEAL IS OFF!
11-24
THANX AND A TIP OF THE HATLO HAT TO — LOUIS SPIELVOGEL, 9 CLINTON ST., NEWARK, N.J.
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1/20 to 5 H.P. AC and DC

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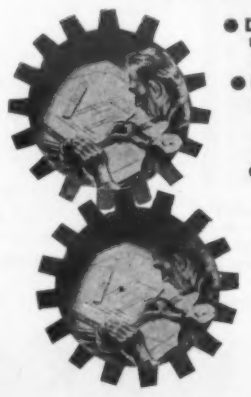

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- **PRODUCTION:** An Emerson-Electric Application Engineer, assigned to each project, personally directs the writing of specifications and performance requirements, from which production is planned.
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Overdue Medals

MAYBE it's about time that some of our double-domed thinkers began to give mature consideration to the important position which the so-called "small businessman" occupies in our nation. In actual numbers, America's "small businesses" are said to constitute 98% of all U. S. commercial enterprises. That's an overwhelming figure when you stop to think about it. And it's a miraculous one, too, when you note that little recognition is accorded the small businessman for investing *himself* as well as his capital and labors in community life.

It's a matter of record that more than 4,000,000 firms belong to the category of small business (less than 100 employes), that they conduct at least 48% of the nation's commerce, and that practically every other wage-receiver works for one of them. In many respects, then, small business is really Big Business, and truly tremendous.

What's more, small business enterprises exert vast influence upon trends, habits, and markets. Independent business-owner-executives have personal contact with the areas they serve. They know their customers personally. They know their markets personally. They can see for themselves where their business is going. In the truest sense, they are the highest common denominators of our free enterprise system.

Why, then, don't we *honor* these independent risk-takers and self-investors, these courageous retailers and servicemen who contribute aggressive efforts, ingenious ideas, hard-earned money, and tireless physical energy to the welfare of America?

Why, yes. But the service firm, dealer, wholesaler, and small manufacturer are more than mere "units" or inanimate "factors" in a soulless system. They are neither statistics nor thumb-tacks on a map. They are Men, human beings with well-developed egos. And as such, their zeal is motivated by a desire to get ahead, either through money-profits, or through recognition and appreciation.

Scoffers who might growl that the granting of honor awards is all right in its place—say, in the case of soldiers and college boys—but would be laughed at by businessmen, should recall the prestige attached to the Nobel prizes. These awards are made yearly for the encouragement of men working in the interests of science and humanity. Nobel prizes single out individual efforts in physics, chemistry, medicine or physiology, idealistic literature, and diplomacy.

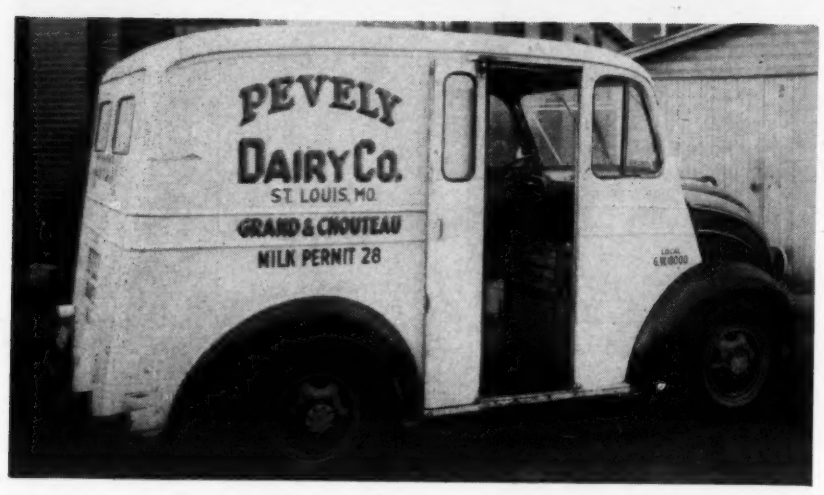
Perhaps a similar system of coveted prestige-awards could be established for small businessmen, so that the priceless element of personal *drive* can be encouraged and renewed regularly. Thus, wherever and whenever a small businessman had exhibited praiseworthy courage in an emergency, or demonstrated unusual skill, or devised a notable invention, or had made and carried out a practical suggestion for the improvement of labor relations, or had otherwise contributed some important service to his city or town, a "Certificate of Community Merit" could be presented.

The effect of such prestige-awards on the caliber of activity and the personal devotion to business of the "forgotten man of commerce" would not be long in asserting itself.

Naturally, a program of Community Honor Awards never could create something out of nothing. But in giving recognition to those businessmen who labor unselfishly "above and beyond the call of duty," it would focus public attention on the important role of the individual entrepreneur in community life.

Little matter whether the community involved in these rewards constitutes a neighborhood, a county, or an entire state. The objective will still be the same: to seek out "service-above-self" small businessmen in their natural habitat—and to honor those who have given, to quote a Biblical phrase: "full measure, pressed down and running over."

Kold-Trux Bows In New Power Take-Off Truck Unit for Front End Motor



On this truck the refrigeration unit is mounted above the floor and can be seen just inside the doorway.

* * *

ST. LOUIS—Designed for front end motor drive installations in cab-over engine trucks similar to Divco and Chevrolet, a new power take-off refrigeration unit has been introduced by Kold-Trux, Inc. here

The unit, which is available in various horsepower capacities, will hold an insulated body at 35° to 50° F. for milk and meats, or -10° to -15° for ice cream and frozen foods. This style truck and unit, the manufacturer also says, are adapted for short city or country wholesale runs or house-to-house retail deliveries.

Mounting under the right front platform of the truck, the refrigeration unit employs the power take-off drive principle used in other Kold-Trux applications, permitting the unit to be driven off the truck engine. When the truck is not operating on the run, the compressor may be driven by a plug-in electric motor.

Prime source of power is a sheave on the engine crankshaft. This is connected by belts to a jackshaft located to the right and parallel with the engine crankshaft. This shaft is directly connected to the fan hub assembly which includes an overrunning clutch, so that the unit speed is governed by truck engine speed, the latter being limited by a governor.

Unit speeds may be increased or decreased in relation to governor speed to meet requirements, compressors being of high speed type which operate as high as 1,800 r.p.m., the company states.

When the electric motor drive is plugged in, a unidirectional clutch in the fan pulley permits the pulley to override the shaft. A similar clutch on the electric motor overrides the latter when the truck engine is driving the compressor, it is explained.

This arrangement is claimed to be a double-acting safety factor. If the truck engine were started when the electric motor was driving the compressor, the power source delivering

From left to right are the refrigeration compressor, power take-off drive shaft, and standby electric motor.

the greater r.p.m. would take over automatically without any strain or harm to either drive, the company asserts.

Plug-in for the electric motor is mounted on the right side of the engine under the hood, thus keeping the plug clean and out of the weather and also minimizing the danger of someone's driving off the truck while the unit is still plugged in, because the hood has to be raised to make the plug-in connection.

No special design is required for the low side of the system. Conventional fin coils, flat plates, or hold-over plates may be used to meet the individual requirements of load and temperature, according to Kold-Trux.

Adequate insulation of the truck body is stressed by the unit manufacturer. For meat or milk delivery operation in the 35° to 50° range, the body should have 3 in. to 4 in. of insulation; ice cream and frozen food applications require not less than 6 in. of a good, light-weight insulation all around.

Brooklyn Service Firm To Maintain Pepsi Coolers

BROOKLYN—Commercial Refrigeration-Air Conditioning Corp. here has arranged with the Pepsi-Cola Co. to take over the entire maintenance of all Pepsi-Cola vending and cooling units installed in Brooklyn, Manhattan, The Bronx, and Queens, William F. DeSpagna, president, has announced.

DeSpagna claimed that his firm is one of the largest independent service organizations in this area.

The company handles General Electric service for the entire metropolitan New York area and distributes commercial refrigeration, air conditioning, and display equipment in Kings county for not only General Electric, but also the Tyler Fixture Co.

The firm also maintains a complete parts department which is available to the trade, and a large fleet of service trucks.

Wilson Assigns Owens To Dealer Relations Post

SMYRNA, Del.—Appointment of W. B. (Bill) Owens as special sales representative of Wilson Refrigeration, Inc. here has been announced by Aubury Davis, vice president in charge of sales.

Owens, who has been purchasing agent for the company for the past three years, will seek to establish a closer working relationship between the factory and its dealers and distributors, Davis also stated recently.

New Hill Booklet Describes Self-Serve Meat Handling

TRENTON, N. J.—A new catalog, "Self Service Meats—How to Cut, Wrap, Display, and Sell" has recently been announced by C. V. Hill & Co., Inc. here, manufacturer of commercial refrigeration equipment.

The 16-page book is intended to give the gist of what Hill has learned about the latest developments in wrapping materials, accessories, and practices, R. J. Parcels, Jr., sales promotion manager, declared.

It cites a number of advantages of self-service meats as compared with clerk-service, gives details on the Hill 37-SS self-service meat display case, outlines wrapping room requirements, describes cutting and wrapping procedures, and illustrates how to wrap the different cuts.

The book is available from the manufacturer here or from local company distributors, Parcels said.

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The KEY to AIR CONDITIONING

by James J. LaSalvia

Automatic Controls (Cont.)

Fig. 29 illustrates the use of the preheater, reheater, and booster steam coils in use with a zone system of heating.

The control of the preheater coils in this case is similar to Fig. 28.

The reheater coil in this case is operated by a modulating type temperature controller ($_cT_m$) located on the discharge side of fan, set at predetermined temperature and which opens or closes the modulating automatic steam valve (V_m). This keeps the air heated at a constant temperature and slightly below the air temperature required to accomplish the heating in the zones.

The modulating type zone thermostats ($_hT_m$) operate their respective modulating type automatic steam valves (V_m) on booster steam coils, and control the temperature of their respective zones.

Fig. 30 shows the simplest control to be used for a straight cold water coil system.

A modulating room thermostat (T_m) actuates an automatic modulating water valve ($_wV_m$) to close the valve when temperature in room goes below the setting of the room thermostat, and to open the valve when temperature in room rises above the setting of the room thermostat.

Note that the automatic water valve ($_wV_m$) in this case is on the leaving side of the coil. This will provide at all times a coil completely filled with water. Also note the air vent location to relieve the air from the water system and water coil, so as not to get air bound.

Fig. 31 shows in elevation the control described in Fig. 30, using two water coils. Gate valves and glove valves should be used as shown for controlling amount of water passing through coils as well as for service.

Any number of coils may be used in this arrangement.

Fig. 32 shows the same control as in Fig. 30 and 31 but using two pairs of water coils in the air stream. In this case when the water has passed through the first coil, it is taken as shown by crossovers to the second coil. This is what is known as counter-flow operation of air and water.

Fig. 33 shows the control of multiple water cooling coils. This is usually applied when more than three coils are used.

A manual-setting modulating type cooling room thermostat (T_m) actuates a step controller, which in turn opens the two-position type automatic water valves ($_wV_2$) on rising room temperatures in steps, and closes the automatic valves ($_wV_2$) on lowering room temperatures, also in step.

Any number of water-cooling coils may be operated in this manner.

The compensated dry-bulb temperature control as shown in Fig. 18 may be applied to this type of control.

Fig. 34 shows the control of water-cooling coils with face and by-pass dampers. This control is very effective and will control the room temperature very close to the thermostat setting.

A manual-setting modulating cooling room thermostat (T_m) controls the automatic water valve ($_wV_m$) and the damper motor operating the face and by-pass dampers.

The compensated dry-bulb temperature control shown in Fig. 18 may be applied to this type of control.

Fig. 35 shows a control that sometimes is used. This system uses a water coil for cooling in the summer time and the same coil provides steam heating in the winter.

For summer cooling a modulating room thermostat (T_m) is used to control the modulating automatic water valve ($_wV_m$) on the water line leaving the coil.

For winter heating a modulating room heating thermostat ($_hT_m$) is used to control the modulating automatic steam valve (V_m).

Shut-off valves must be provided on the water supply and return lines, and also on the steam supply and return lines, so that only water or steam may be used at one time.

(To Be Continued)

Complete System of Heating Coils for a Zoned Installation

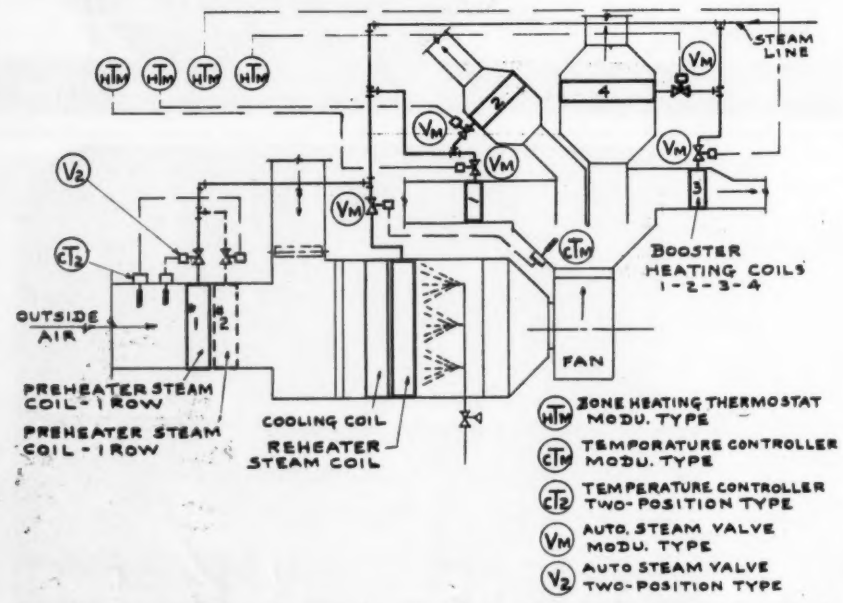


Fig. 29 shows the plan view of the controls for air conditioning system which includes two preheater steam coils, a cooling coil, a reheater steam coil, and a booster coil in a zoned system of heating.

Control for Two Coils

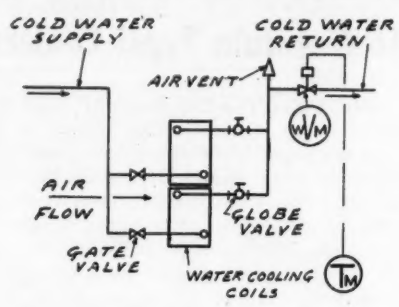


Fig. 31 illustrates how two water coils can be controlled. It is essentially the same as Fig. 30, which shows only one coil.

How Water Coils Are Controlled for Air Conditioning

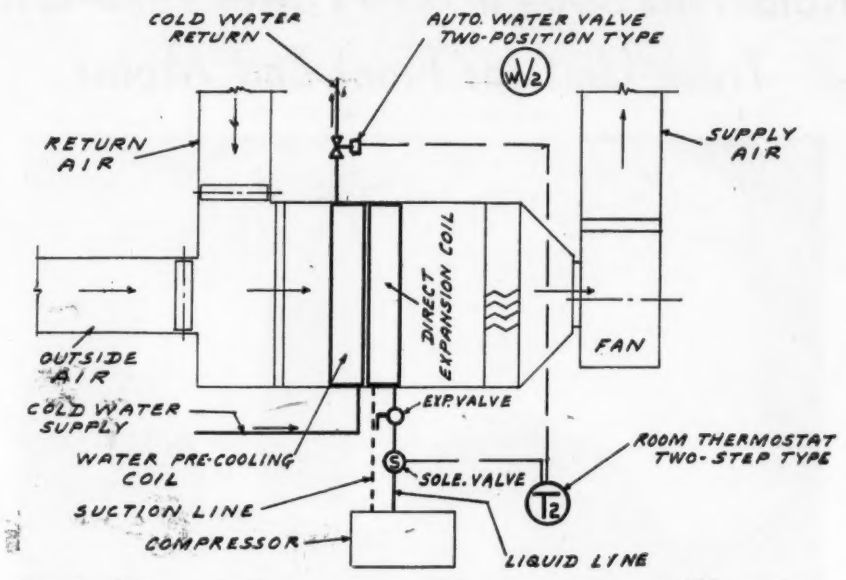


Fig. 30—Where a cold water coil instead of a direct expansion system is employed for cooling, this control system is the simplest that can be used. It includes a modulating room thermostat and an automatic modulating water valve in the return line.

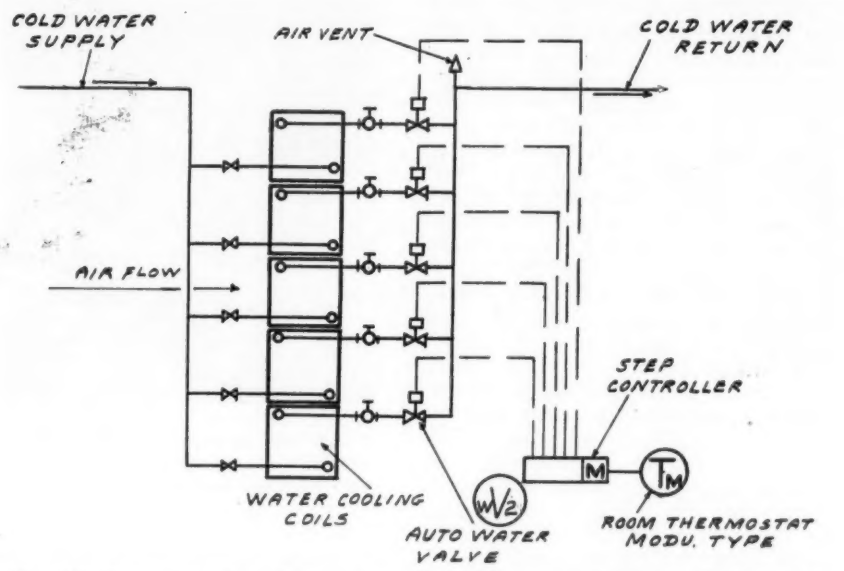


Fig. 33—Control hookup for a system employing several water coils in an air conditioning system is illustrated above.

Counter-Flow Operation

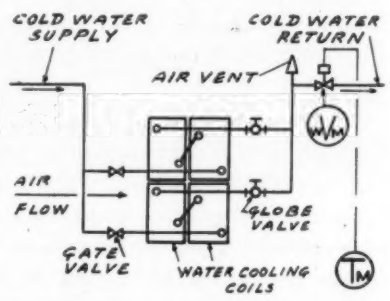


Fig. 32—Two pairs of water cooling coils are employed here, being hooked up to provide counter-flow operation of air and water.

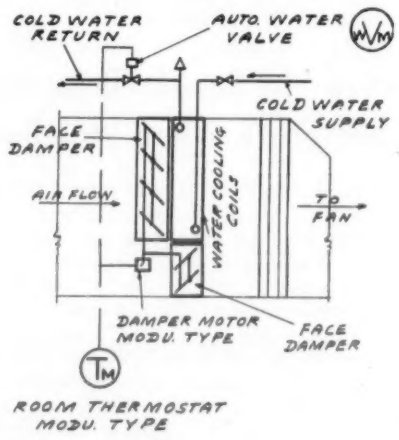


Fig. 34—Controls for face and by-pass dampers incorporated in a water coil system are diagramed above.

Coil Heats or Cools

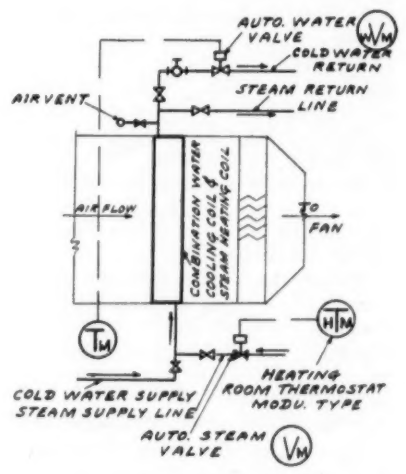
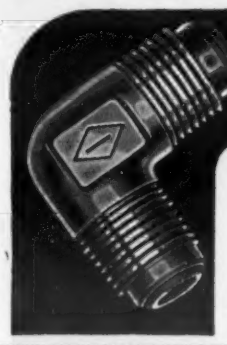


Fig. 35—Sometimes used is this combination coil setup wherein cold water is supplied to the coil in summer and steam in winter.

. . . for extra protection against leakage



IMPERIAL Triple-Seal FITTINGS

. . . The Flare Fitting with the groove in the seat

When the flare is drawn against this groove the copper tubing is extruded into the groove making a tight, self-sealing joint. Here is the joint that remains leakproof even though the face of the seat may be nicked or marred. This extra seal of safety is a plus feature that costs no more. Included in all sizes 3/8" and larger.

THE IMPERIAL BRASS MANUFACTURING COMPANY
565 South Racine Avenue • Chicago 7, Illinois

New Condenser Cuts Refrigeration Costs Saves Cooling Water

• The Niagara Aeropass Condenser cuts the cost of refrigeration by running compressors at lower head pressure, saving up to 35% of power.

The refrigerant gas passes thru two coils in an air stream. The first, "Duo-Pass"* dry coil, removes the superheat by air cooling and condenses oil vapor. The second, condensing coil, drenched by recirculated water spray, condenses by evaporation, transferring to the air 1,000 BTU for every pound of water evaporated and saving more than 95% of the water used by water-cooled condensers. This done at low temperature, no scale forms on condenser tubes to clog air passage.

Between the two coils is the "Oilout"*, which purges the system of crankcase oil and dirt, keeps it always at full capacity.

The "Balanced Wet Bulb"* control holds head pressure low, automatically giving the full benefits of power saving in cool weather and providing always full capacity for peak loads.

Units range from 10 to 100 tons capacity.
For full information ask for Bulletin 103.

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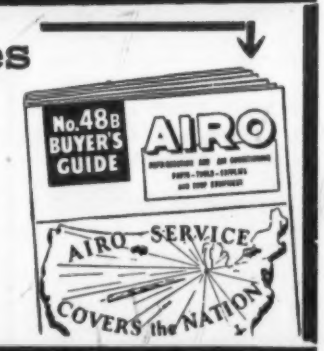

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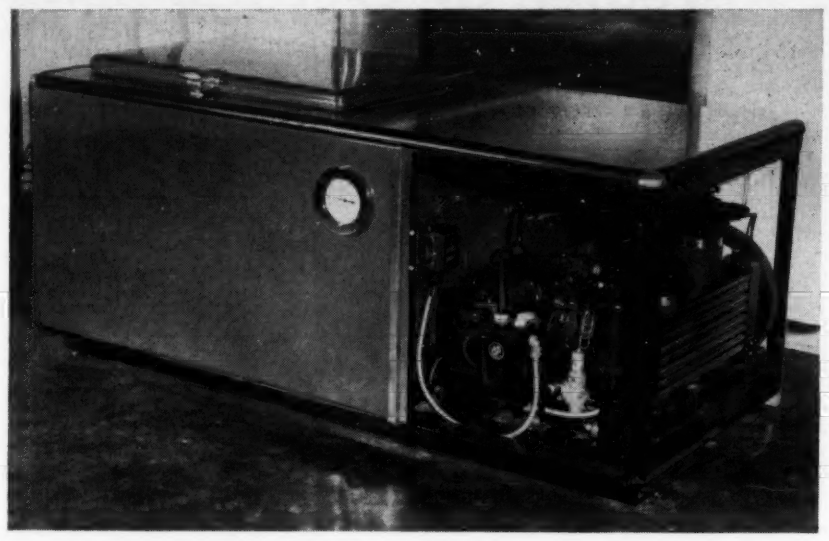
Anything from 3-Cu. Ft. to Small Test Room



Low-temperature cabinet produced by J. R. Miller Corp.

* * *

Miller Corp. Turns Out Custom Low-Temp Cabinet Line for Industrial Application

DETROIT—Described as a "new industrial tool" providing "automatic sub-zero cold," a low temperature cabinet intended for industrial and laboratory applications has been introduced by the J. R. Miller Corp., local refrigeration manufacturer, for distribution on a national scale.

A self-contained two-stage "Freon-12" refrigeration system powers the standard model, which is a 5-cu. ft. job designed to operate at -60° F. under full load conditions, according to Hugh Scullen, the designer, and J. R. Miller, the manufacturer.

The line, however, will be aimed at custom-built equipment ranging from a minimum of 3-cu. ft. capacity up to small test rooms, it was indicated. Temperatures in the -100° to -130° F. range can also be provided, states the manufacturer.

Mounted on a base made up of two structural steel "Z's" arc-welded to angle-iron tie-bars, the body of the cabinet consists of two major sections, the insulated refrigerated compartment and the machine section.

Refrigerating equipment is mounted on pull-out base at one end of the unit for ease of servicing. Liner of the cabinet is of 16-gauge stainless steel with all seams arc-welded. Seams are likewise arc-welded in the outer shell, which is of heavy gauge mild steel. The fully welded seams prevent moisture migration to the insulation, which consists of 6 in. of Fiberglas in the -60° model, 8 in. in the -100° version, declares the manufacturer.

A fully counterbalanced insulated lid is employed, finished to harmonize with the cabinet. The remainder of the top is covered with 16 gauge stainless steel to provide attractive, practical work surface.

Although the refrigerant circuit is claimed to be radically different from anything previously developed, standard interchangeable parts are used throughout, the manufacturer states.

Refrigerant control is provided by a unique combination of capillary tube and high side float, to regulate the flow of "Freon" to the "wrap-around" evaporator.

Because the two compressor units do not start simultaneously, the motor horsepower requirements are greatly reduced, claims the manufacturer. Controlled by an adjustable thermostatic element, the refrigeration system is so designed that it can be set to maintain any temperature between 50° above to -60°, with only one compressor operating at the higher temperatures.

Other features of the cooling system include a permanent silica gel dryer connected in the high side and maintained at a constant low temperature for greater effectiveness; a cleanable water cooled condenser; and oil separators on each of the two stages of compression.

The return of liquid refrigerant or oil slugs is rendered impossible due to the design of the circuit, which eliminates the possibility of damage to the compressor valves, claims the manufacturer. For greater accessability for adjustment and repair, the two-stage compressor unit, together with all the controls and accessories, is mounted on a pull-out base, which can be very easily removed and replaced.

Scullen, who developed the unit, has been in refrigeration design and development work since 1926, while Miller has been active in refrigeration engineering and manufacturing since 1927.

Silvercote Insulation Book Lists 'U' Values

CHICAGO—A new handbook of insulation values is now being distributed by Silvercote Products, Inc., Chicago, manufacturer of reflective insulation materials.

One of the book's features is that for the first time it includes both winter and summer insulation values, technically known as "U" values.

The 108-page book lists 12,852 certified, F.H.A. approved "U" values of various walls, floors, and ceilings. The coefficients shown in the book were calculated in accordance with F.H.A. calculation procedure, according to Warren Knudson, vice president of Silvercote, who prepared the book.

Illustrating the book are 238 drawings showing typical wall, floor, and ceiling sections. The drawings illustrate the proper position of the insulation to obtain stated "U" values.

Copies of the handbook may be obtained free of charge by qualified architects, engineers, and builders, by writing to Silvercote Products, Inc., 161 E. Erie St., Chicago 11, Ill.

Don Hilke Leaves Weber Fixture To Become Mfrs'. Agent In 7 Western States

LOS ANGELES—Don Hilke, formerly with the Weber Showcase & Fixture Co., has announced that he has established himself as a manufacturers' representative to cover distribution in the seven western states.

Don Hilke

Hilke's office is located at 1007 S. Grand Ave. here.

Hilke said that he has made arrangements to represent several eastern soda fountain, restaurant, and bar fixture manufacturers, including Phenix Soda Fountain Co., Inc. of New York City, Johnson Plastic Tops, Inc., of Elgin, Ill., Mark Metal Mfg. Co., of Philadelphia, and Refrigerated Equipment Mfg. Corp. which operates out of New York City.

Filtrine Makes Line Of Low Side Coolers

BROOKLYN—To broaden a wide range of equipment for water cooling, filtration, and dechlorination, Filtrine Mfg. Co. here announces the availability of a complete new line of low side coolers in copper and with copper evaporators.

The new line includes units with evaporators ranging in size from 5 to 105 sq. ft. of surface. Their application is suited to air conditioning and all industrial purposes where non-ferrous metal is preferable to the conventional galvanized steel, according to the company.

Grocer's Pull-Over Hood on Refrigerated Cases Gives Produce Added Freshness

DENVER, Colo.—Ten self-service refrigerated cases in the meat department are featured in the newest Miller Supermarket opened at 700 Colorado Blvd. here recently by the Miller Groceteria Co.

Behind the cases, packaging girls work along an elevated platform facing out toward the grocery area. Here it is easy for customers who want particular cuts of meat to ask for them, the store management explained.

Another feature of the store, 15th unit in the Miller chain, is the installation of refrigerated bins for the produce display. These bins are equipped with hoods that cover over the stock at night. The pull-up hoods insure an even temperature over the interior to eliminate spoilage.

High speed checkstands, including "express" check-out counters for customers with small purchases, wide aisles, 15 rows of fluorescent lighting, and parking space for 192 automobiles are other attractions.

Dr. A. P. Thompson Appointed Eagle-Picher Research Head

CINCINNATI — Appointment of Dr. A. Paul Thompson as director of research of the Eagle-Picher Co., effective Feb. 1, has been announced by the company.

Dr. Thompson's appointment fills a vacancy created some time ago by the death of Earle W. McMullen.

Pinnacle

BAKERY DISPLAY CASES

Now Available for IMMEDIATE DELIVERY

TWO SIZES
6 and 8 feet long
54" high - 34" wide

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Compare Pinnacle Bakery Display Cases, feature for feature—value for value! Frame constructed of dry No. 1 lumber securely fastened together with screws. Govt. approved insulation. Exterior top, back and bottom covered with rust resistant metal. Front and ends finished in two-coat gleaming white porcelain.

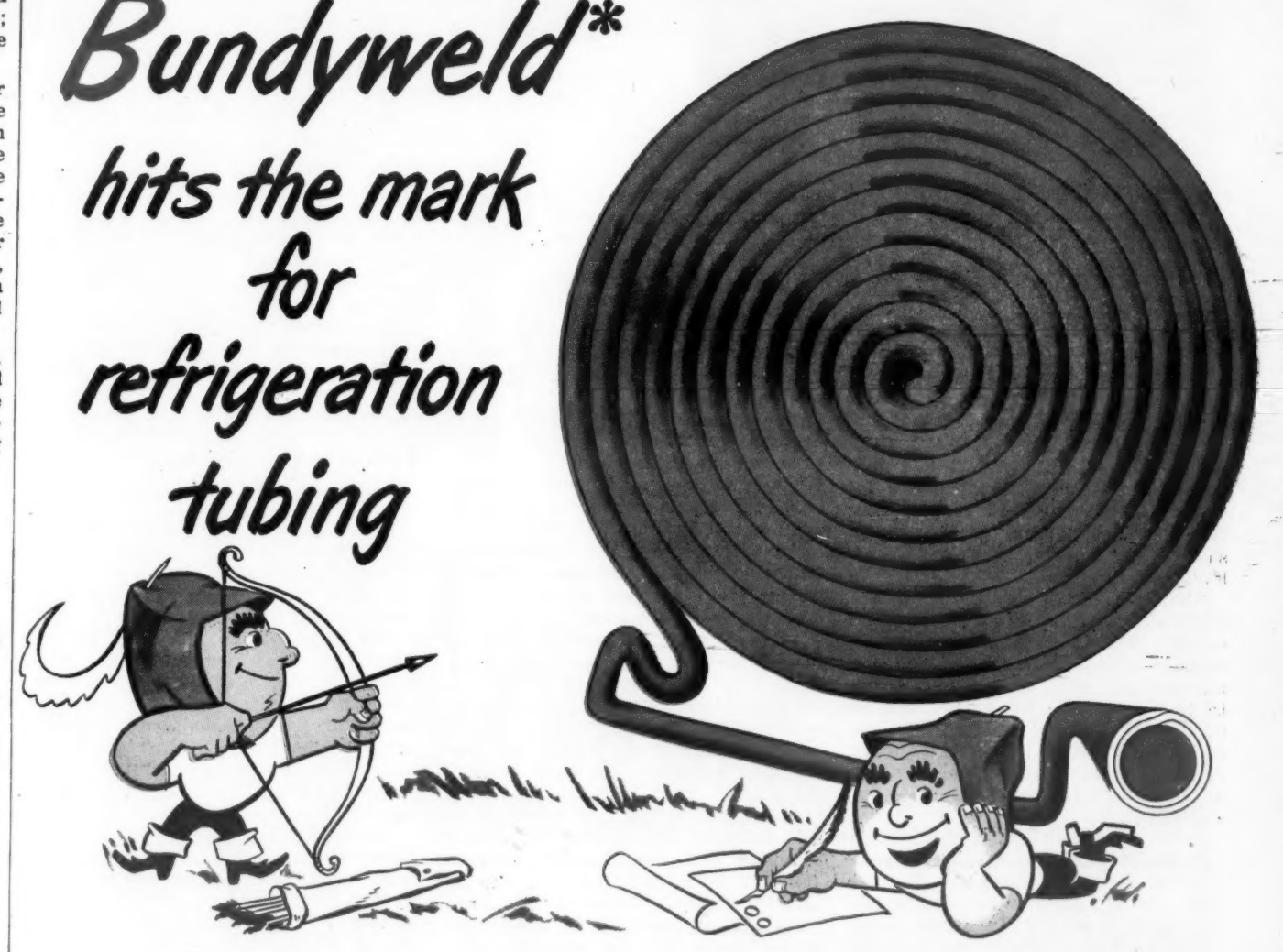
A few exclusive Pinnacle territory Franchises are still available. Wire or write immediately for full information.

Pinnacle EQUIPMENT CORPORATION
FLEETWOOD, PENNSYLVANIA

FREE FOLDERS of complete line.

Export Dept.: 39 Broadway, New York

Bundyweld* hits the mark for refrigeration tubing



Bundyweld hits the mark as a better tubing for refrigeration applications.

An examination of its exceptional features will quickly reveal why. First of all, Bundyweld *and only Bundyweld* is double-walled from a single strip of metal. This exclusive Bundyweld construction means, to you, a thinner-walled, faster-cooling, extra-strong tube at low cost.

Second, Bundyweld is easy to fabricate because of its unusual ductility combined with the strength of steel. Its extra strength permits bending to short-radius turns without fear of collapsing.

Many makers of better refrigeration equipment use Bundyweld for evaporator and condenser coils, for compressor and connector lines. Why not join them in using this tubing for your refrigeration equipment, too?

No matter what your need—steel, Monel, or nickel tubing—your nearest Bundy distributor, among those listed below, can help you. Or write directly to: *Bundy Tubing Company, Detroit 14, Michigan.*

BUNDY TUBING
ENGINEERED TO YOUR EXPECTATIONS
* REG. U.S. PAT. OFF.

WHY BUNDYWELD IS BETTER TUBING

1 Bundyweld Tubing, made by a patented process, is entirely different from any other tubing. It starts as a single strip of basic metal, coated with a bonding metal.

2 This strip is continuously rolled twice laterally into tubular form. Walls of uniform thickness and concentricity are assured by close-tolerance, cold-rolled strip.

3 Next, a heating process fuses bonding metal to basic metal. Cooled, the double walls have become a strong ductile tube, free from scale, held to close dimensions.

4 Bundyweld comes in standard sizes, up to ⅝" O.D., in steel (copper or tin coated), Monel or nickel. For tubing of other sizes or metals, call or write Bundy.

BUNDY TUBING DISTRIBUTORS AND REPRESENTATIVES

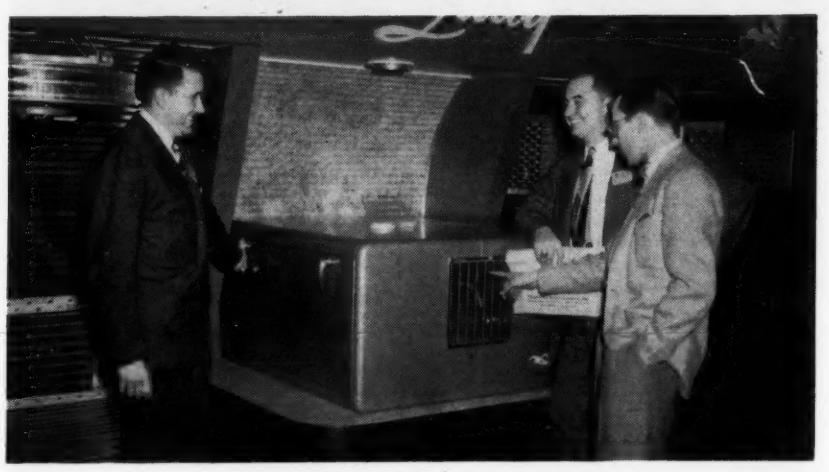
Cambridge 42, Mass.: Austin-Hastings Co., Inc., 226 Binney St. • *Chattanooga 2, Tenn.:* Peirson-Deakins Co., 823-824 Chattanooga Bank Bldg. *Chicago 32, Ill.:* Lapham-Hickey Co., 3333 W. 47th Place • *Elizabeth, New Jersey:* A. B. Murray Co., Inc., Post Office Box 476 • *Philadelphia 3, Penn.:* Rutan & Co., 404 Architects Bldg. • *San Francisco 10, Calif.:* Pacific Metals Co., Ltd., 3100 19th St. • *Seattle 4, Wash.:* Eagle Metals Co., 3628 E. Marginal Way • *Toronto 5, Ontario, Canada:* Alloy Metal Sales, Ltd., 881 Bay St.

BUNDYWELD NICKEL AND MONEL TUBING IS SOLD BY INTERNATIONAL NICKEL COMPANY DISTRIBUTORS IN PRINCIPAL CITIES.

Some New Items, Many Improved Designs, Are Revealed at Chicago Show

R. K. Waters (far left) of Continental Air Filters, Inc. explains the firm's new automatic self-cleaning filter to R. Stites, Coon-DeVisser Co., Detroit, while at right, Judy Zuckerman of Chicago takes her ease while getting an explanation of the unit from Sam Stein of Engineering Sales Co., Chicago.

H. G. Kipp of Curtis explains a few features of the company's redesigned 5-ton packaged conditioner, model FWH-600-PA to W. Steinkamp, Charles Marzolff, H. J. Nettler, and A. E. Stuckert. The interior is so arranged that water and heating connections may be made from either side.



McQuay's finely finished model "RH" air conditioner for installation in the conditioned space is shown by John Hultgren of McQuay (left) to H. Walker Powell and W. D. Graham of Greensboro, N. C.

Trion, Inc. has small demonstration models of its electric air filter with which salesmen can show the operating effects of a larger unit.

Frigidaire's window units are studied by (at left) H. G. Williams of Fedders and Charles Graham of Frigidaire, and at right by V. E. Durston and A. W. Larson, Larson Refrigeration, Chicago.

A compact 5-ton evaporative condenser model is demonstrated by Stanley Bernstein (right) of Temp-Control, Inc., to H. B. Davis, Chicago engineer. This line of evaporative condensers goes down to 3 tons capacity. At left is Temp-Control's 5-ton "highboy" packaged store conditioner.

Curtis Offers Capacity Reduction Regulator

Several pieces of equipment were on display at the exhibit of the Curtis Refrigerating Machine Div. of Curtis Mfg. Co., and among these were three new items: (1) a restyled 5-ton packaged air conditioner, (2) a capacity reduction regulator, and (3) a 5-hp. condensing unit.

Chief feature of the latter is that it is equipped with a shell and coil type water-cooled condenser in answer to growing demands for this type of construction, the company says. The unit is designated as FWH-500-RC.

The restyled air conditioner, model FWH-600-PA, has a completely new cabinet. Major changes affecting the interior permit both the water connections and heating line connections to be made from either the left or right-hand sides. Formerly these connections could be made at only one side. The new arrangement is expected to considerably simplify installation.

Capacity reduction in four steps (25, 50, 75, and 100%) on the larger size machines is obtainable with the new capacity reduction device Curtis is introducing. It consists basically of a solenoid control arrangement which can be installed in the field or at the factory. For field installations a new cylinder head is required. The four-step control is adapted for machines from 7½ to 30-ton sizes. On smaller sizes up to 5 ton, it provides two-step capacity control at 50% and 100%.

McQuay Refines Designs For 'Connected' Jobs

McQuay, Inc. revealed a broad line of equipment for air conditioning applications, many models of which had new features, or had been redesigned.

Prominent in the display were a central station conditioner needing only connections to sources of refrigeration and heating, the "RH" series of ceiling mounted air conditioners, and the Icy-Flo "storage battery" refrigeration systems which have a special use in air conditioning.

Marked by its compactness and the accessibility of the various components, the central station unit includes cooling coils and heating coils, a humidifier section, blower section in wide range of capacities, face and by-pass dampers, and high velocity air filters.

The model "RH" air conditioners are designed for economical ceiling mounted air conditioning applications. They are finished in an attractive hammered metal finish, since they will be installed in the conditioned space, and are available in 2, 3, 5, and 7½-ton sizes.

The Icy-Flo accumulator refrigeration system is designed to provide economical cooling effect in applications where the cooling load comes in an 8-hour-or-less period. It builds up a reserve or "storage battery" type of refrigeration. A new size large model provides 720,000 B.t.u. capacity, double the capacity of the smaller size.

Also shown by McQuay were direct-expansion cooling coils, chilled water cooling coils, and cleanable-type water-cooling coils, available in 17,000 different styles and sizes.

Temp-Control Offering Conditioners, Condensers

A redesigned and extended line of packaged store conditioners, and a series of evaporative condensers that go down to 3-ton capacity marked the exhibit of Temp-Control.

The 10-hp. model being introduced this year gives Temp-Control a line with 3, 5, 7½, and 10-hp. sizes. The new design gives a much greater intake area, and hence greater operating efficiencies, it is claimed. Construction features include an all-steel frame through the machinery compartment, and a baked enamel finish.

These packaged conditioners are shipped in two sections to make the installation and handling easier.

The Temp-Control evaporative condenser line now includes models in the 3, 5, 7½, and 10-ton capacities.

Also merchandised by Temp-Control is the Jaden line of year-round air conditioners for both domestic and commercial applications. These units are designed so that mechanical cooling equipment, or city or well water may be used.

Continental Introduces Self-Cleaning Filter

A new type of automatic self-cleaning air filter was shown by Continental Air Filters, Inc., of Louisville, Ky.

This air filter consists of a steel cabinet, in the bottom of which is an oil tank, and around the inside of which filter cells, suspended from chains, move in Ferris wheel fashion. The cells move up the front (dirty air side) of the cabinet like a curtain, then across the top, then down the back, finally being submerged in the cleaning tank at the bottom before again starting upward.

The carrier chain is actuated by an electric motor and suitable gear reducers, and is controlled by an automatic, adjustable, electric time-control. The time control is usually adjusted so that each filter cell will pass once through the filter liquid in each 24-hour period.

The filter media employed in the Continental filter consists of formed corrugated strips of aluminum or other metal which are placed together to form a "honeycomb" effect.

Niagara Blower Corp.'s "No-Frost" refrigeration system, which provides automatic cooling effect, was center of attention in the Niagara booth, which also displayed evaporative condensers and other components.

Trion Has Helps for Electric Filter Sales

A special kit consisting of an electric air filter and a blower which is claimed to require very little more space than a conventional auxiliary blower was shown by Trion, Inc. with the aim of sales to manufacturers of warm-air furnaces so "when they sell warm air to the public they also sell clean air."

Also displayed by the company was its standard model self-contained electric filter which is available in four sizes rated at 1,200, 1,800, 2,400, and 3,600 c.f.m. capacities, plus the miniature working models which have been successfully employed for several months in making on-the-spot sales demonstrations.

Arrangements have also been made, the company announced at the show, for "matched combinations of Trion electric air filter and Chrysler Airtemp heating and air conditioning equipment for Airtemp dealers."

Minneapolis-Honeywell drew good attendance to its exhibit with showings of its improved electronic air conditioning and heating controls, now made with replacable assemblies. Another item that drew interest was an "electronic psychrometric chart."

Jim Knab of Knab Heating & Plumbing Co., Milwaukee; Warren Kendall, Art Bernthal (pointing), Phil O'Connell, all of Bundy Tubing Co.; and Dan Knab of the Milwaukee firm check over the matter of the application of Bundyweld tubing in the heating and air conditioning field.

Inspecting the working core of a Mitchell ¾-hp. window type room air conditioner are J. B. Graham of Los Alamos, N. M., and Charles Leopold, well-known Philadelphia consulting engineer.

Displaying at this show for the first time, the Bahnson Co. featured a working scale model of its Humiduct self-contained air conditioning unit for industrial applications, a new DC spray nozzle operating in the spray washer in the background, and atomizers, from whence those jets of moisture are coming on the right.

The regular line of refrigeration and heating gauges was shown by the Jas. P. Marsh Corp., with special emphasis on its Tri-trol regulator which controls indoor temperature in accordance with outdoor weather conditions.

Mitchell Stresses Ease of Window Unit Installation

The ¾-hp. and ½-hp. window room air conditioner models made by Mitchell Mfg. Co. were shown in attractive "window section" display settings, which not only show how the conditioners appear in actual installation, but also demonstrate the quick, easy installation in a window in the home or office.

The Mitchell window units provide cooling, dehumidifying, filtering, and circulating of the air. Refrigeration effect is provided by a hermetically sealed cooling mechanism.

Acoustic insulation and resilient rubber mountings are used to provide quiet operation. The unit consists of three main assemblies—an outer cabinet, which fits into the window; the chassis, which slides into the outer cabinet on steel rails, and the decorative cabinet, which appears inside the room. Decorative cabinet is of smooth, streamlined design, constructed of furniture steel with English bronze finish.

Servel's Year-Round Unit

Removable panels on the Servel year-round gas-fired air conditioner enabled visitors to see the "inner workings" of the system.

USAirCo Shows Variety Of Conditioning Units

In the broad line of air conditioning products displayed in the United States Air Conditioning Corp. exhibit, the spotlight was on the "Refrigerated Kooler-Aire," a complete "ready-to-run" central station unit, and on a new ½-ton window air conditioner.

The Kooler-Aire units, completely self-contained and needing only connections to ducts, water, and power, are available in 3 to 40-ton capacities.

A special feature on the Kooler-Aire models is a two-stage evaporative condenser with special water baffle, and water reservoir and return pump to eliminate water disposal problems.

Other features in this central unit include a refrigerant system charged and tested in the factory, all electrical circuits in a simplified control panel, heavy-duty compressor with compressor and motor force-ventilated, and compressor line vibration eliminators.

The USAirCo window-type room air conditioner is being introduced in the ½-ton size only, but other sizes will be introduced at a later date. It cools, dehumidifies, filters, and circulates the air. Fan section may be operated separately for air circulation in the winter.

Air is discharged through an outlet in the curved top-front of the unit. A feature of this window unit is its compact size—it extends into the room only 11⅝ in., and over-all size is 26 x 25 x 13 in.

A number of new features are incorporated into the company's 1949 line of packaged store conditioners. Among these are the manual controls hidden under a nameplate on the front of the unit, to prevent tampering; a removable plenum chamber and heating coil; Deflecto grilles to permit air throw in any direction; and semi-hermetic refrigeration compressor.

Also exhibited were the evaporative coolers handled by Great National Air Conditioning Corp., a subsidiary of United States Air Conditioning Corp. Included in this line is the new "De-Hu-Matic" evaporative cooler featuring a thermally activated control which automatically controls rate of evaporation. In this system five zones of cooling and filtering capacity are brought into action in response to load needs.

Bahnson Co. In Inaugural Exhibit of Its Line

Displaying its line of equipment for the first time at any national air conditioning show, the Bahnson Co. of Winston-Salem, N. C., featured working models of some of its air and humidity control equipment. While manufacturing much of its own equipment, the company until recently has concentrated on engineering and installing textile mill and other types of applications. Now it is setting up national distribution for its products.

New was a "DC" nozzle for spray air washers which, it is claimed, can replace as many as 20 conventional nozzles. Its improved operation also reduces the volume of water that has to be pumped and thus the size of the pump.

There was also an operating display of the "ESC" atomizing nozzle for applications where humidity must be added to the air. By using both air and water pressure, better control over the atomizer is obtained, the company says.

Third item on display was a working scale model of the Bahnson "Humiduct," a unit system for humidifying, cooling (evaporatively), heating, ventilating, filtering, or dehumidifying air in industrial applications such as textile mills, tobacco plants, paper, printing, woodworking industries, and the like.

Marsh Puts Spotlight On Tri-trol Regulator

A wide variety of its refrigeration gauges, thermometers, and its regular heating line was displayed by the Jas. P. Marsh Corp., with the chief accent being on its Tri-trol regulator.

The instrument is designed to regulate indoor temperatures with any kind of firing or heating system, depending on variations in outdoor temperature and periodic on-off operation. A thermostatic bulb, located outdoors, cuts out operation when outdoor temperature goes above 65° F. A day-night time switch and an electrically controlled timer regulate temperatures when the outdoor dry bulb is below 65° F.

Raytheon Oil Mist Model for Plant Use

In its line of electronic precipitation-type air cleaners, Raytheon Corp. exhibited an oil mist model designed for industrial applications—shop work in which machining, grinding, or high-speed cutting operations are a part.

An injector-type cooling tower which generates needed air circulation through injecting air under water pressure is demonstrated by John Engalitcheff of Baltimore Air Coil Co. to Louis and Harry Hoffman of Greensboro, N. C.

The United States Air Conditioning Corp. exhibit drew a steady stream of visitors to see the "ready-to-run" central station air conditioning system—the "Refrigerated Kooler-Aire"; and a new window room air conditioner, as well as store conditioners, recessed units for remote installation, and a line of evaporative coolers.

What's New

* * *

Compressor In Window Unit Is Rubber-Mounted

CHICAGO—A new, compact, thermostatically controlled room air conditioner has been announced by the Lenco division, Louis Engineering Co. here.

The new unit, called the model L-750, cools, dehumidifies, filters, and circulates the air in a room at any desired temperature, company officials said. It has a capacity of 8,541 B.t.u. per hour and moves air at 296 cfm.

The window unit measures 16 by 27½ by 27½ in. and extends only 12 in. into the room. Shipping weight is approximately 235 lbs.

Air is drawn from either inside or outside the room and passed through a coated spun glass filter to remove dust, dirt, and pollen before it enters the cooling chamber, the company explained.

The air is then dehumidified and cooled to the desired room temperature and circulated throughout the room. Thermostatic setting can be made to individual requirements, the company added.

The unit is entirely enclosed. The mechanism is mounted on rubber and springs to reduce noise. Cabinet is sound deadening and vibrationless. It is designed for easy installation in standard windows without alterations or brackets, Lenco officials said.

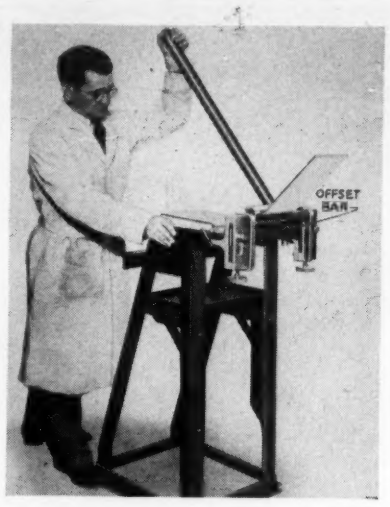
The section of the cabinet that extends into the room is made of decorative hardwood. It is finished in blonde or two-tone to blend with the room setting. Finish is protected by three coats of semi-glass lacquer.

The part of the unit that extends outside the window is Bonderized steel zinc chromate, primed and finished with baked-on enamel. It will withstand a 700 hour salt spray test, according to the manufacturer.

No controls are visible. All are mounted on a control panel within the unit with clearly marked instructions for operation. A service cord extends from either side of the window unit.

The refrigeration system is hermetically sealed with all joints silver soldered. The system is charged with "Freon-12." A Copelametic compressor allows for servicing in the field, the company declared.

The Louis Engineering Co. is located at 214 W. Ontario St., Chicago 12.



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Form-Bar Will Cold-Bend Metals In Long Lengths

NEWARK, N. J.—A new tool called the Form-Bar Bender which will make cold bends on the job of copper, aluminum, brass, and mild steel bar and strip through a complete range of sizes from ⅛ by 1 in. to ½ by 6 in. has been introduced by W. R. Scott & Son, Inc. here.

According to the manufacturer, the bender is portable, simple to operate, and requires no special training or workmen. It makes bends up, down, sideways, and twists. It makes short offsets and Z bends.

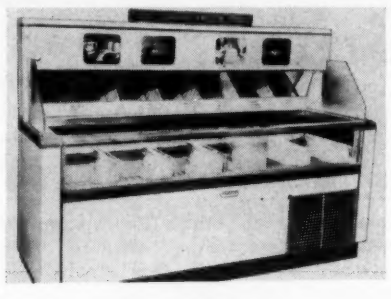
A vertical mounting position makes the tool very flexible for handling long lengths of material.

The manufacturer is located at 234 S. 11th St. here. National distributor is Graybar Electric Co.

Pictures on New Frozen Food Cabinets Aid Sales

PHILADELPHIA—Two new frozen food merchandising cabinets, both featuring three dimension, natural color "Sell-A-Vision" pictures in the superstructure, are being introduced by Haldorf Mfg. Co. here.

Model 7 PL, with 575 package capacity, is an open-type, quick service unit, with six separate compartments,

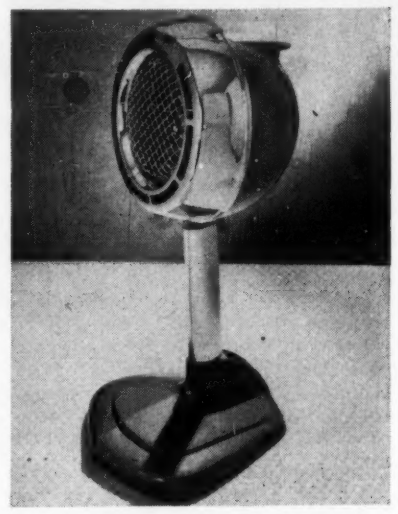


Haldorf Model 7 PL.

separated by cold plates and equipped with removable baskets for quick merchandise adjustment.

Model 4818-2P, with 725 package capacity, is a closet-type cabinet, with roller equipped, vacuum sealed lids. This unit also has the "Sell-A-Vision" pictures, illuminated superstructure, mirror, and menu strips.

Both of these Sell-A-Vision cabinets are finished in gleaming white enamel, and have black recessed base, polished chrome trim.



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Heat King Portable Fan Comes In Torpedo Design

CHICAGO—The National Die Casting Co., Touhy Ave. at Lawndale here, has recently announced its Heat King portable, fan-type electric heater. It features a torpedo design with directional heat control and adjustable height.

Said to be noiseless, the heater has a rated capacity of 1,320 watts and offers instant heat flow heat at any angle, because the head may be tilted 45° to front or back.

Weight of the heater is 8 lbs. It retails for $23.95.

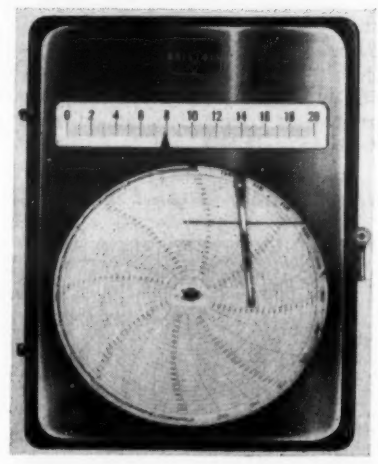
Recorder Aids Conveyor Timing In Production

WATERBURY, Conn.—The development of a new instrument for recording time-in-process has been announced by the Bristol Co. here.

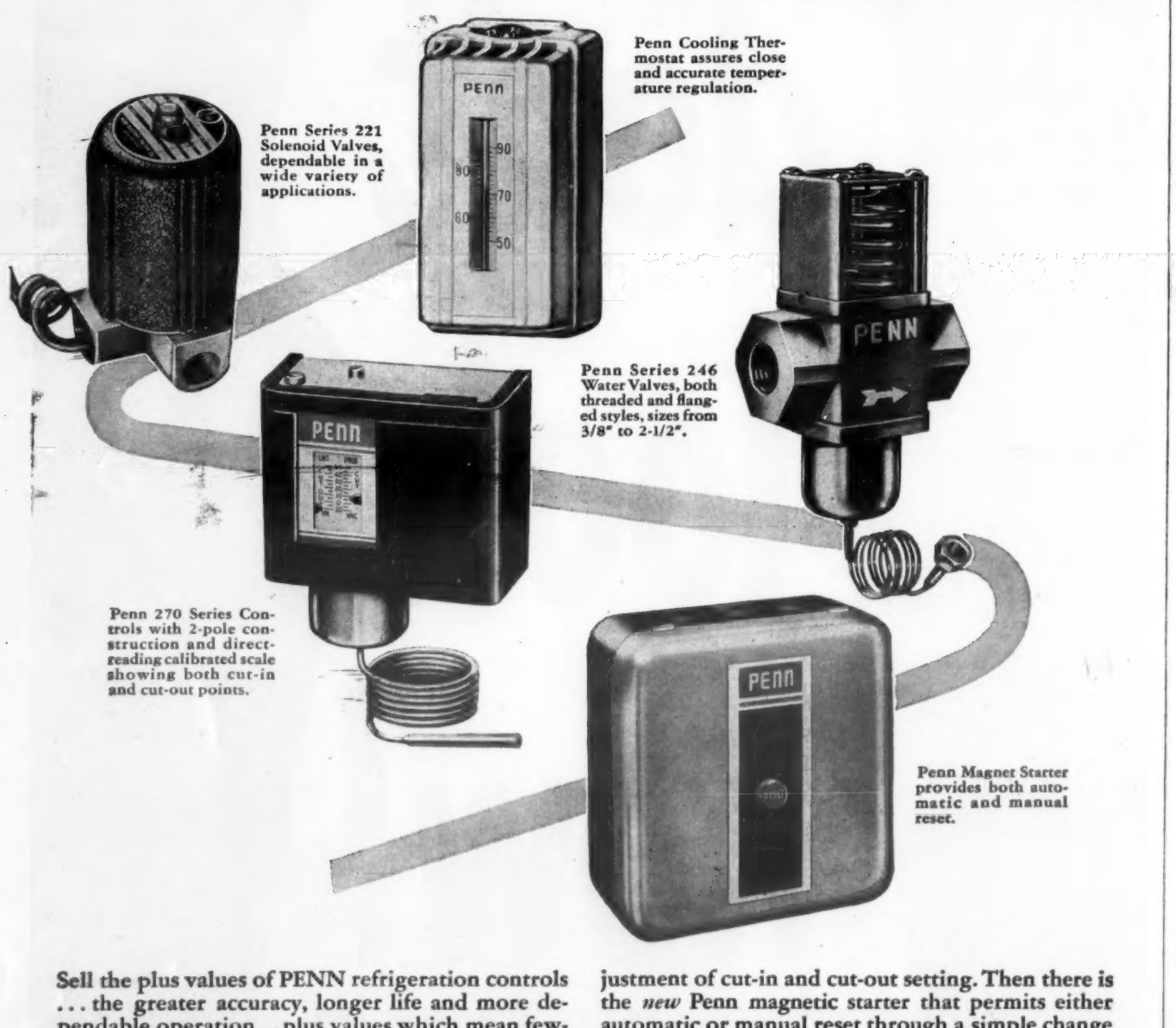
The instrument gives a reading on a uniform scale and chart of rate of conveyor movement, directly in terms of the total time consumed by work in traveling through a process.

With the new instrument, the readings of time-in-process are given directly with no calculations required. This simplifies the problem of establishing the correct conveyor speed for the desired time in process for a given product and eliminates errors.

Bristol Time-In-Process Recorders are used on such equipment as continuous furnaces for metal annealing, tempering, and hardening; continuous drying and baking ovens; continuous ceramic kilns; and continuous glass leirs.



PENN *Plus Values* mean PROFIT for you



Penn Cooling Thermostat assures close and accurate temperature regulation.

Penn Series 221 Solenoid Valves, dependable in a wide variety of applications.

Penn Series 246 Water Valves, both threaded and flanged styles, sizes from 3/8" to 2-1/2".

Penn 270 Series Controls with 2-pole construction and direct-reading calibrated scale showing both cut-in and cut-out points.

Penn Magnet Starter provides both automatic and manual reset.

Sell the plus values of PENN refrigeration controls ... the greater accuracy, longer life and more dependable operation... plus values which mean fewer service calls, more customer satisfaction and extra profits for you!

Leader of the Penn complete line of refrigeration controls is the versatile "270" Series. This is the first and only load-carrying 2-pole switch in the air conditioning and refrigeration field. Available in "single" and "dual" types, the "270" also features a direct-reading calibrated scale. Advantage? Easier adjustment of cut-in and cut-out setting. Then there is the *new* Penn magnetic starter that permits either automatic or manual reset through a simple change of spring position. Automatic reset is especially desirable in commercial refrigeration, to prevent spoilage in case of temporary overload.

Ask your wholesaler for information on Penn's complete line of refrigeration controls, or write to **Penn Electric Switch Co., Goshen, Ind.** Export Division, 13 E. 40th Street, New York 16, U. S. A. In Canada: Penn Controls Ltd., Toronto, Ontario.

PENN AUTOMATIC CONTROLS

FOR HEATING, REFRIGERATION, AIR CONDITIONING, PUMPS, AIR COMPRESSORS, ENGINES, GAS RANGES

BRUNNER SINCE 1906 REFRIGERATION helps you serve better

Here is real Refrigeration Application help!

Even with a sound knowledge of refrigeration principles and a broad installation experience, refrigeration men rarely find the answers on any two jobs to be alike. That is why we have included a great deal of helpful, time-saving application data in this new Brunner catalog. Several pages of "cross section" illustrations help in showing customers exactly why you recommend a certain size and type of condensing unit.

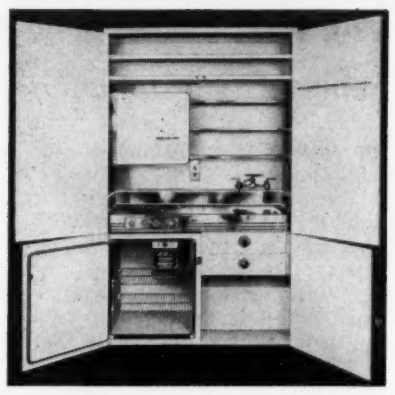
Equally important are 22 pages of illustrations and capacity data on all the Brunner air and water cooled refrigeration condensing units.

BRUNNER MANUFACTURING CO.
Utica 1, New York, U. S. A.

● To responsible refrigeration men, this data will prove valuable. A note on your letterhead will bring a copy by return mail. No charge.

AIR AND WATER COOLED MODELS
¼ HP. TO 30 HP.

What's New (Cont.)



Restyled Pureaire Kitchen Occupies Only 8 Sq. Ft.

TRAVERSE CITY, Mich.—A newly restyled 1949 Pureaire packaged kitchen has been announced by the Parsons Co. here.

The unit, which packs all essential elements of a kitchen in 8 sq. ft. of floor space, contains a 5½-cu. ft. refrigerator, a three-unit electric range, an "eye-level" oven, a sink, two drawers, five shelves, a light, ventilating unit, and two electrical outlets.

Sales Manager John A. Rishel, Jr., explained that "Whereas we used to have six doors, there are now four. Specially designed handles have replaced the hardware formerly used. Styling of the oven, refrigerator, drawers, working surface, shelves, and storage facilities is changed."

The company said that it had spent about $500,000 retooling for the new model and is turning them out at the rate of "hundreds per day."

Krack Unit Cooler Claims 3-Direction Distribution

CHICAGO—New construction and operational features are incorporated in the new 1949 model of the Krack "Fan-E-Fex" unit cooler, which is now available to the industry, it was announced by Hugh Smart of Refrigeration Appliances, Inc., here.

Features embodied in the new line are said to include adjustable louvers which together with the "double duty, extra deep" drain pan, provide for three directional air distribution; full-size, built-in heat exchangers; cadmium-plated nuts, bolts, and screws; baked pearl grey wrinkle finish of the galvannealed steel housing with rounded corners and edges.

The Fan-E-Fex line is available in nine sizes with basic ratings from 265 to 1,400 B.t.u. per hour. All units are equipped with the Krack "Sur-E-Fex" coil elements.

Refrigeration Appliances manufactures a complete line of low-side units for commercial refrigeration and air conditioning, including units for ceiling, wall, or floor installation and high or low temperature applications. It also makes a full line of blast coils for air conditioning and gravity coils for commercial use.

New Cordley Water Cooler Features Sealed System

NEW YORK CITY — Cordley & Hayes has announced complete specifications, presented in a 4-page folder, for the first electric water cooler in the Cordley 60th anniversary line.

This new water cooler, model M-10, has a hermetic completely sealed refrigerant system covered by a 5-year replacement warranty.

Features include means of adaptation to bubbler, glass filler, or remote fountain; electro galvanized and Bonderized cabinet in Hammerloid gray; stainless steel top with deep basin, high temperature dehydrated and sealed refrigerant system; lifetime oiling; moistureproof housing for tank and pre-cooler; pre-cooler with seamless, electrolytic copper shell; 18-8 stainless steel storage tank; adjustable temperature control; flush plumbing connections anchored to prevent twisting.

G-E Automatic Washer Is Rectangular and Portable

BRIDGEPORT, Conn.—A new simplified automatic washer model has been announced by the General Electric Co.

Designated the AW-6B1, the new washer is a rectangular, top-opening, portable machine which does not have to be bolted down. All water connections—the hot and cold water inlets and the drain—are made with rubber hose. It will wash, rinse, and damp-dry up to 8 lbs. of clothes.

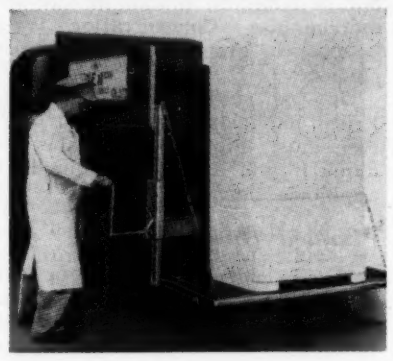
The present deluxe automatic washer—the AW-6A3—will remain in the line. Shipments of the new standard model AW-6B1 begin about March 1. No price has yet been announced for this model.

The activator washing action of the machine cleans clothes by soaking, flexing, and rubbing.

Because clothes are spun in the wash basket at a speed of 1,140 r.p.m. during the drying cycle, it is said many pieces are actually dry enough to iron immediately.

The washer is powered by a sealed-in driving mechanism that is covered by a five-year protection plan. A powerful pump will empty the tub, which holds 16 gallons of water, in three minutes.

Venco 1-Man Loader Will Pick Up 600 Pounds

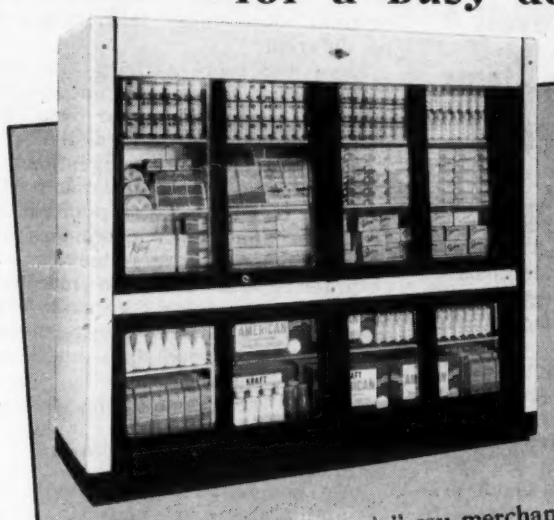


LOS ANGELES — The new, improved Venco "one man loader," deluxe model 25, is a hand operated, lifting tailgate, strongly built to give maximum service under all conditions, made by the Ven Corp., 2832 Newell St. here.

It fits any pick-up truck, has a nominal capacity of 600 lbs., and is easily installed by bolting into place.

Finished in durable, red equipment enamel, the frames and housings are of formed, highly tensile steel plate. The sturdy, box-shaped upright members ride on 2-in. ball bearings. The platform is raised by two roller chains, assuring positive drive both up and down. The chains proof test at 3,000 lbs. per strand. Nine turns of the crank raises tailgate, which folds up in the usual manner. Both crank and rachet shaft are mounted in flanged ball bearings to reduce frictional losses. Roller type crank handle provides for smooth, easy lifting.

"hire this star salesman for a busy department"



Model RD-70 shown
Clear, perfect vision . . . always . . . for dairy products, makes Warren Model RD outstanding. Sliding doors top and bottom, manual temperature control, automatic defrosting.

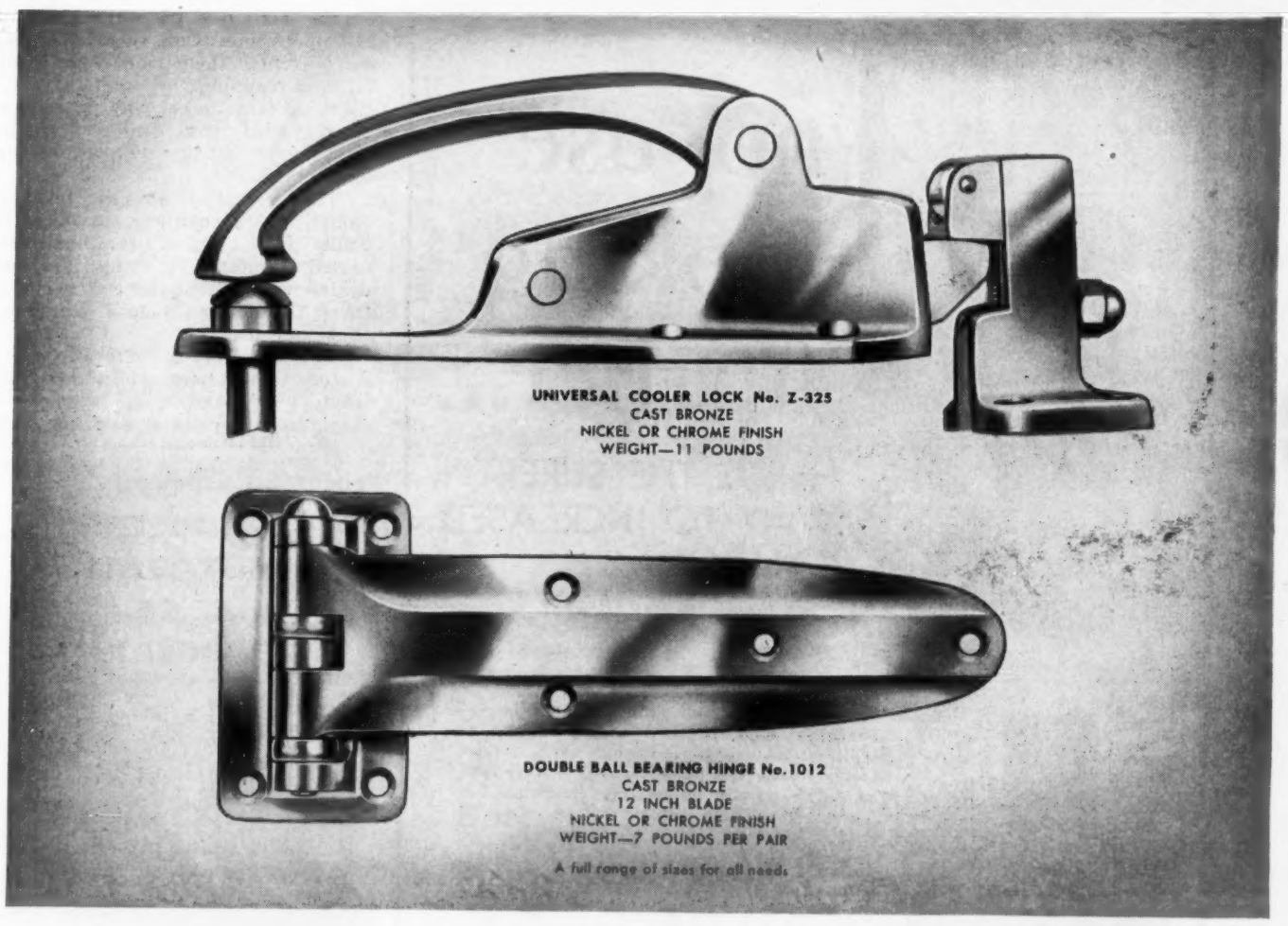
"BUSY, busy salesman," say merchants about the new Warren Model RD. Glass doors are "moisture-proof" . . . perfect display at all times sells milk, butter, eggs, cheese "on sight."

Almost foolproof performance is engineered into this unit. Completeness of line makes the Warren franchise a profitable representation for you.

Write Dept. 502 for complete details NOW.

WARREN QUALITY ATLANTA, GA.

The WARREN COMPANY INCORPORATED
905 MEMORIAL DRIVE, S. E. ATLANTA 1, GEORGIA


UNIVERSAL COOLER LOCK No. Z-325
CAST BRONZE
NICKEL OR CHROME FINISH
WEIGHT—11 POUNDS
DOUBLE BALL BEARING HINGE No. 1012
CAST BRONZE
12 INCH BLADE
NICKEL OR CHROME FINISH
WEIGHT—7 POUNDS PER PAIR
A full range of sizes for all needs

This HARDWARE laughs at "Hard Wear"

Good hardware—smart looking, built to function smoothly and to last a long time.

Write for Catalog

ARCADE MANUFACTURING DIVISION
ROCKWELL MANUFACTURING COMPANY
FREEPORT, ILLINOIS

EVERYTHING FOR THE COMMERCIAL OR INDUSTRIAL ELECTRIC REPAIR SHOP!

WRITE FOR FREE, 238 PAGE ILLUSTRATED CATALOGUE
(On Your Letterhead, Please)

COMPLETE - READING ELECTRIC CO., INC.
108 S. JEFFERSON ST., CHICAGO 6, ILL. TELEPHONE: CENTRAL 6-5390
"Your Best Source of Supply"

Selling Appliances In 1949 Will Demand Daring, Imaginative Promotion

Watch Inventory Level, Drop Slow Moving Items, Says NARDA Sales Panel

CHICAGO—"No longer in 1949 will the same old threadbear ideas bring customers into your store. You must be daring, creative, imaginative; people must be impressed by the sparkle and originality of your promotions."

Harry Price, Price's, Inc., Norfolk, Va., offered this advice to dealers attending the recent annual convention of the National Appliance and Radio Dealers Association. He spoke as chairman of a panel which presented ways for retailers to strengthen their sales efforts in order to survive the weeding out anticipated this year.

In addition to Price, the panel was composed of T. R. Rosenkrans, Pawpaw Appliance Co., Pawpaw, Ill.; Sam Vining, merchandising consultant, Westinghouse Electric Corp.; and Ed Ellman, Personnel Institute, Chicago.

"The trick is to do the right thing at the right time," Price explained in discussing planned promotion. "You can take many old 'tested, tried, and true' promotions and use them, but dress them up—give them the 'new look.'

"Make people in your community say—'The Acme Appliance Co. is on the ball—they're always doing something, and their ideas are clever and original.' Remember this: 'Dare to be different.'"

More and more activity and promotion must be planned outside the store to compensate for any decreases in floor traffic, he added.

Price also had some suggestions on merchandising and salesmanship. Regarding the former, he pointed out that more and more customers are insisting on top quality lines.

"Inferior and 'off-brand' merchandise is swiftly dying," he said. "You must have good lines with models and prices to appeal to a maximum number of people."

Further recommendations were:

Wise Selection of Brands

"Do not hesitate to eliminate unprofitable items or lines. It is not necessary because you have the broad designation of an appliance store to continue to stock slow moving items. . . .

"Stores must be well lighted and merchandise attractively displayed.

"Installation, and more especially service, must be emphasized to a maximum. The key to more sales is through better service. Whenever possible, have your own service department.

"Keep a vigilant eye on your inventory investment. Stock turns will determine your ultimate profit performance.

"Avoid buying gadgets and gimmicks that clutter your shelves—and on which you eventually take a markdown.

"Reduce to a minimum the number of different brands of the same merchandise. Concentration is the keynote to greater effectiveness and efficiency."

On the subject of salesmanship, Price emphasized that "your salesmen must improve their sales technique if you are to continue in the appliance business."

Planned Outside Selling

"Begin now to train your salesmen," he urged. "Have morning sales meetings. Have evening sales meetings. Teach and teach—guide and direct. Salesmen will follow if you will lead. Have salesmen working outside in planned activity. . . .

"Compensate salesmen well—particularly with incentive pay. Keep up their morale and competitive spirit. Develop team play and loyalty to the organization. . . ."

Turning to how NARDA fits into the picture for 1949, Price said the most important challenge facing the association is "to increase the retail mindedness of the manufacturers and distributors." He urged manufacturers to intelligently and comprehensively study the problem of strengthening dealers' sales efforts.

Value of Mfr. Sales Aids

Price noted that many dealers have an attitude of antagonism toward manufacturer aids, "because some lack intelligent application to our individual markets and because some are not worth the cost."

But remember, he told the dealers, "most good promotions brought to you by your manufacturer are successful activities of other good retail operations. Cull them over, but don't exclude them from your thinking and planning."

Rosenkrans, who was introduced as a typical rural dealer, presented some ideas for this type of retailer to think about.

"The electrical dealer," he said, "must have a complete survey of his trade area. Farm families have varied standards of living. The wise dealer will anticipate the needs of these farmers and stock equipment they can use.

"The farm family prefers to buy in a store that is neat, well lighted, and where merchandise is attractively displayed. The dealer and his salesmen should at all times be courteous and civil, remembering that the most irritating individual may turn out to be the best customer.

"Constructive advertising and merchandising programs should be carried out. The dealer can have exhibits at fairs, large rural picnics, local gatherings, and dealer-conducted farm shows. If the dealer's area warrants, he should tie in with national advertising programs.

"The dealer can expect repeat sales if he carries in stock or knows where he can get repairs for the appliances he sells. He should have the tools and competent servicemen to install and service the units he sells. . . .

Farmers Want Bigger Models

"I feel we must heed some of the complaints of the farmer and maybe profit from them. He complains that most equipment, in the home at least, isn't large enough; present day equipment isn't as good as before the war, and, of course, the price is too high. They say the dealer puts off attending to minor complaints until after the guarantee period and servicemen are not adequately trained.

"On the other hand, the dealer is expected to make prompt service calls—sometimes only to find the equipment has been abused by not being properly cared for or overloaded or the dealer or salesman who sold the equipment did not make sure adequate power was available. . . .

"Too many farmsteads are wired on contract without definite specifications as to conductor sizes and with no consideration for anticipated needs in the future.

"As a result, when the dealer sells a piece of equipment, such as a milking machine, conveyor, or blower, it may not operate efficiently, or it may not operate at all. The dealer gets the blame for selling the inferior merchandise. It is very important that the dealer check his power requirements against the power available before delivery.

"I think the electrical dealers, with the cooperation of their particular distributor, should have a big day such as the farm machinery dealers have, where they invite all their customers in for lunch, some entertainment, and short demonstrations by factory-trained men on the care of appliances. . . ."

Declaring that the market in 1949 will be a "salesman's market," Vining advised the dealers to execute their plans "boldly."

"You must know what you're going to do and then do it with all the enthusiasm you have," he said.

The key to success this year, he stressed, is an organization built solidly and with the right type of material. In building such an organization, dealers should have faith in young men, he declared.

Young Men Built Industry

"There is a tendency to look for the older men with experience," he remarked. "But they're just as big a gamble. Remember this, this business was built during the depression by young men who didn't know any better."

Vining recommended that dealers carefully select the right men and then put them into an organization with a plan. Go at recruiting "as though each man you hire will eventually become a partner," he said.

He also noted that this is an era of increasingly successful women salesmen. The "curse" of hiring women, he noted, is that the employer is "likely to be influenced by pity and by types of women."

Ellman echoed Vining's conviction that the dealer's success in 1949 depends upon his ability to build an organization. Saying that "you are somewhat out of practice at hiring men," he advocated use of NARDA's special salesman hiring kit.

This kit contains a handbook of hiring and improvement, preliminary screening interview forms, application blanks, diagnostic interviewer's guides, and aptitude tests.

Care In Hiring Salesmen

Ellman advised the dealers to take time to do a thorough hiring job.

"See 20 men before you hire one," he said. "Don't hire the first one who comes in."

In answer to a question from the floor, Vining said young men in an organization will "counterbalance old fogy ideas." But their selection and handling are important, he asserted.

"First, I'd put the young man in the service department for familiarization, but wouldn't let him use tools. Then, I'd put him on a delivery truck so he can see the reaction of a woman getting her first appliance, but I'd have him keep his mouth shut.

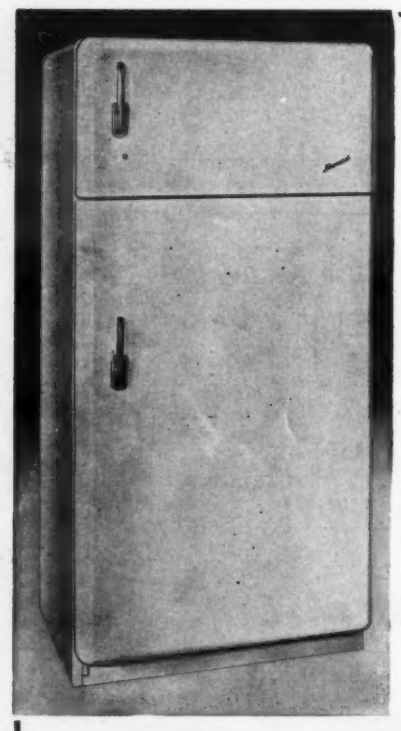
"Next, I'd put him out on the floor on routine maintenance jobs. Then, I'd encourage him to make telephone calls and follow-ups. The first thing you know, he'll be selling."

Emphasis on Young Men Will Help Dealer Build Selling Organization

Harrison Heads New Division For Los Angeles Distributor

LOS ANGELES—M. G. Sues, president of Sues, Young & Brown, Inc., local distributor, has announced the formation of a sales division to be managed by William P. Harrison.

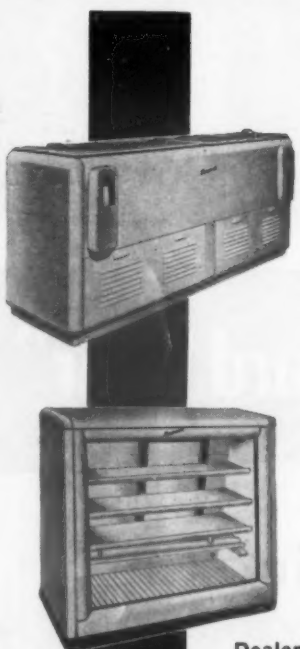
The new division will be responsible for the distribution of Speed Queen washers and ironers, Hamilton clothes dryers, Thermador ranges, and Vornadofans.



no use looking further...

HERE'S THE SUREST WAY TO INCREASED SALES!

A complete selection of refrigerators awaits your inquiries. These systems are designed for farm, city, or commercial uses.



★ Model 1302, two temperature refrigerator, size 67½" high, 32" wide x 52½" deep. Ten cubic feet of regular refrigerator space, 3 cubic feet of frozen food locker storage. Five ice cube trays, 10 pounds of ice per freezing. Two porcelain vegetable crisper drawers. One ¼ H.P. semetric unit, for both temperatures.

★ Model FV 4 foot and FV 6 foot full vision display cases, 30" deep, 50" high. Porcelain front and top; also, porcelain shelves. Triple glass thermopane display, fluorescent lighting. Made remote and fully self-contained ready to plug in.

★ Dry beverage coolers, all self-contained, can be used as a wet cooler also. Made in a wide range of popular sizes and capacities for both electric and ice coolers—from 5 cases to 30 cases.

★ All aluminum clad Walkin Coolers and Freezers. Wide range of sizes—equipped with solid or glass door reach-in service doors.

★ Thirteen to 65 cubic foot capacity Reachins with solid or glass doors, blower coil, ice maker, and baker dough retarder models.

★ Ice cream cabinets and freezers—a wide range of sizes and capacities.

Dealers, distributors, and wholesalers will marvel at the sales advantages of Howard's outstanding refrigeration systems.

Howard

WRITE FOR COMPLETE CATALOG

HOWARD REFRIGERATOR CO., 507 ARCH ST., PHILADELPHIA 6, PA.

Processed especially FOR THE DEHYDRATION OF REFRIGERANTS

PA 100*

DAVISON Refrigeration Grade SILICA GEL

Ask your jobber for dehydrators charged with PA 100, Davison Refrigeration Grade Silica Gel . . . he also stocks it in the can with the blue label.

. . . OVERCOMES YOUR REFRIGERANT DRYING PROBLEMS THESE 7 WAYS . . .

1. instant action . . . 2. maximum capacity . . . 3. removal of acids and corrosive compounds . . . 4. freedom from caking . . . 5. freedom from channeling of refrigerant . . . 6. will not attack metals or alloys . . . 7. dust-free drying. That's why leading refrigeration service engineers insist on PA 100 Davison Refrigeration Grade Silica Gel.

*T. M. REG. APP. FOR

THE DAVISON CHEMICAL CORPORATION

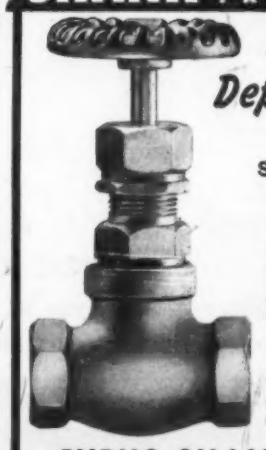
Progress through Chemistry

BALTIMORE-3, MD.

PIONEERS AND DEVELOPERS OF SILICA GEL

Canadian exclusive agents for DAVISON SILICA GEL:
CANADIAN INDUSTRIES LIMITED, Sales Division, Chemical Group

SHANK REFRIGERATION PRODUCTS



Most Dependable

SHANK SEMI-STEEL SHUT-OFF VALVES

Highest grade non-porous metal—full size ports—clean cut threads. Back seated stem. Shank design base—perfect alignment. Long life packing ring.

See your jobber or write for prices.

CYRUS SHANK CO.

631 W. JACKSON BLVD., CHICAGO 6, ILL.

Presenting Gibson Service Pins

Charles J. Gibson (right), president of Gibson Refrigerator Corp., congratulates two of the more than 600 winners of gold pins given by the company for loyal service. Arnold C. Baldwin (left) and Edwin D. Jacobs (center) are divisional sales managers and have a collective service record of 64 years.

Pearson Will Manage G-E Credit Office In Memphis

ATLANTA — G. H. Pearson has been appointed manager of the Memphis office of General Electric Credit Corp., according to D. O. Thomas, district manager here. Pearson was formerly credit manager of the Raleigh, N. C. office, he further stated.

Victor J. Cox Co., Fresno, Opens Remodeled Appl. Store

FRESNO, Calif. — The newly-remodeled electrical appliance store of the Victor J. Cox Co. was opened at 2820 Tulare St. here on Dec. 2. The remodeling, property, and inventory represent an investment of approximately $250,000, Cox said.

Modernistic in design, the store is equipped with radiant heating.

Hotpoint's New LC2 Automatic Washer To Be Introduced by Selected Dealers

CHICAGO—Details of a plan to introduce Hotpoint's new LC2 automatic clothes washer through selected dealers in each sales district were revealed by Leonard C. Truesdell, vice president of marketing.

The Chicago, Cleveland, and Kansas City districts will be opened in February, with New York and Philadelphia scheduled for March, Atlanta in April, and Dallas and San Francisco in May and June. It is expected that all markets will have been opened by July, he said.

Dealers will be selected by distributors on the basis of their ability to sell home laundry appliances; display, demonstrate, advertise, and promote aggressively; and render efficient service where there is no central service arrangement, according to Truesdell.

Each market will be opened with newspaper advertising on a selected Sunday, with retailing of the new washers beginning on the following Monday—this day being traditionally regarded as washday.

Local advertising and promotion programs will be built around a theme of "workless wash days." Radio advertising and direct mail will reach the consumer the same day.

For the last 60 days, marketing department heads and other company officials have been conducting distributor meetings throughout the country to acquaint them with the details of the introductory program. After receiving sample washer models, distributors will conduct preview meetings with their own sales organizations, followed by individual conferences with selected dealers.

When these conferences have been completed, and initial carload shipments of washers have reached the distributors, a group of Hotpoint marketing officials will visit distribution points and conduct an introductory presentation meeting for the selected dealers. This will be followed by delivery and installation of washers in the dealers' stores.

Under the terms of the introductory program, all customers who purchase the new washer will be given a complete demonstration after the appliance has been installed in their homes. In metropolitan areas, demonstrations will be conducted by part-time home demonstrators employed by distributors; in small town and rural areas, representatives of servicing dealers will give the home demonstrations.

Truesdell said the selected dealer program was adopted because it would be impractical to try to introduce the new appliance in all markets simultaneously.

Stanley M. Jones Elected Intermountain Assn. Head

SALT LAKE CITY, Utah—Stanley M. Jones, branch manager of Westinghouse Electric Corp., was elected president of the Intermountain Electrical Association at a meeting here recently.

Also elected were: J. F. McAllister, vice president; James L. Schricker, secretary-treasurer; and Walter Kletting, Walter G. Wood, Lester B. Johnson, E. M. Royle, O. R. Bigelow, Lewis A. Dahn, Ora Barlow, W. A. Huckins, Leland B. Flint, Reed E. Vetterli, Sydney B. Cooper, Arnold Sieverts, Paul W. Flandro, all of Salt Lake City; Curtis L. Minor, mayor of Logan; and Douglas Peck, Provo, directors.

Dept. of Agriculture Recommends Priorities For New Work In Cold Storage Field In '50

WASHINGTON, D. C. — Recommended priorities for new work in the cold storage field for the 1950 program under the Research and Marketing Act were issued recently by the Cold Storage Advisory Committee to the U. S. Department of Agriculture.

The committee also reviewed the work already in progress, which included research on problems relating to the preservation and marketing of frozen foods, to the locker industry, and to commodity refrigeration on the farm, in transit, storage, wholesaling, retailing, as well as in the home.

Priorities for 1950 work were listed under two classifications. One was the utilization and quality preservation of farm products. The other was the marketing of farm products.

Under the first classification were the following:

1. Reduction of deterioration, incompatability of products in storage, and volatile and odorous substances (for odorous commodities: citrus, fish, onions, apples, white potatoes, etc.) by control, modification, and purification of storage atmosphere.

2. Loss of quality in farm products during transit that could be eliminated by more effective refrigeration.

3. *Need for understanding of basic principles of thermodynamics and related fields such as heat transfer and effects of ice formation in foods.

4. Preservation of quality of poultry and meat during storage by control of water vapor phase of storage environment.

5. Behavior under refrigeration and cold storage of heat processed foods (meats, citrus juices, evaporated milk, etc.)

6. Behavior under refrigeration and cold storage of dehydrated vegetables.

7. Behavior under refrigeration and cold storage of dehydrated milk.

8. Behavior under refrigeration and cold storage of pecans.

9. Behavior under refrigeration and cold storage of seeds.

Under the marketing of farm products were listed:

1. Relation of protective coatings, packaging and pre-packaging to the behavior of products in cold storage, particularly poultry, eggs, meat, cheese, and fish.

2. Amount and type of storage provided and services rendered by frozen food locker plants.

3. Educational program with producers, on refrigeration of farm products.

4. Educational program with "the trade," on refrigeration of farm products.

5. Educational program with consumers, on refrigeration of food.

*Would be No. 1, from a long-range standpoint.

A LEADER
in REFRIGERATION SERVICE
HAJOCA

It is the combination of the best in refrigeration and air conditioning equipment *plus* a complete stock of pipe, valves and fittings that make Hajoca the ideal ONE-STOP Service Center. Keep your jobs efficient and on time. Make Hajoca your headquarters for all air conditioning supplies and equipment.

A LEADER
in CONDENSING UNITS
Lehigh BLU-COLD

Lehigh BLU-COLD Condensing Units are famous for their dependable, long-life . . . their efficient engineering and economy of performance. This leader among refrigeration equipment is available through Hajoca, both air and water cooled and from ¼ to 5 horsepower.

Write for Hajoca 1949 Air Conditioning and Refrigeration Catalog. Dept. R1, Box No. 7319, Philadelphia 1, Pa.

HAJOCA CORPORATION
31 Branches Serving the Atlantic Seaboard
General Offices:
315T AND WALNUT STREET BRIDGE
PHILADELPHIA 4, PA.

"Same insulation they use in the best commercial refrigerator cases!"

IT WORKS BOTH WAYS

"Same insulation they use in most home refrigerators today"

FIBERGLAS insulated — FIBERGLAS INSULATION MADE BY OWENS-CORNING FIBERGLAS CORPORATION — TOLEDO, OHIO

..a swell feature to have
..a swell feature to sell

OWENS-CORNING
FIBERGLAS
THERMAL INSULATION

Fiberglas is the trademark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation

Wall WIRE PRODUCTS COMPANY
Manufactures of...
REFRIGERATOR SHELVES · STAMPINGS
FORMED AND WELDED PRODUCTS

There is no reason to be satisfied with less than the best . . . In Refrigerator Shelves that means Stainless Steel.

WALL WIRE PRODUCTS COMPANY Plymouth, Michigan

Commercial Refrigerator Dealers' Operating Experience In Postwar Year

Study Shows Up Certain Deficiencies In Dealer's Accounting and Record-Keeping

Editor's Note: The following material is excerpted from the report on "Commercial Refrigerator Dealers Operating Experience In 1947," a survey of the operations of 94 such dealers made by Dun & Bradstreet for the Commercial Refrigerator Manufacturers Association. Copies of this "Dealers Operation Manual" are available from CRMA headquarters, 111 W. Washington St., Chicago, at $1 per copy.

The typical commercial refrigerator dealer who participated in the survey operated in 1947 at a net profit (before taxes) of 6.1% on sales of $250,000. This typical profit was equivalent to earnings of 35.7% on net worth.

"Typical" or "average" ratios as compiled in this survey are shown in Table 1. They are medians, computed by first listing the particular ratio for each dealer in the order of its size, and then selecting as "typical" the ratio halfway down the list.

Average gross profit, after paying reconditioning expense on used equipment and the expense of installation and service, amounted to 25.4% of net sales. Overhead expenses totalled 19.3%. Inventories were turned an average of six times during the year.

("Cost of goods sold" consists of "opening inventory, plus purchases, minus closing inventory, plus reconditioning, installation, and service expense." The inclusion of installation and service expense was a compromise made necessary by the fact that many of the responding dealers were unable to separate reconditioning expense from installation and service, and some incorporated all such items in cost of goods sold.)

Average Selling Expense

The total selling expenses of 7.7% consisted mainly of compensation to salesmen, with their salaries, bonuses and commissions averaging 5.1% of sales. It is likely that most of the 1.3% of "all other expense" consisted of advertising expenditures.

Management salaries of 4.2% were the most important of the administrative expenses, which totalled 11.6%. The next highest ratio is the 2.8% for "all other administrative expense;" this category including expenditures not allocated to other accounts listed, such as bad debt losses, license fees, and telephone.

Inventories increased during the year by more than one third—from 11% of sales to 14.9%. The survey report commented that while some of this rise may be traceable to price advances, it is probable that the major part of the increase reflects mounting physical inventories.

Annual sales per salesman averaged $57,400: selling expense per salesman averaged $3,700. (The term "salesman," as used in these two ratios, includes owners and officers engaged in selling, as well as others employed as salesmen.)

Net worth turnover (sometimes called "sales per dollar of net worth") indicates the relationship between scale of operations and investment in the business. A high turnover rate indicates an efficient utilization of the capital invested in the business. Too high a turnover rate, however, may be an indication that the company is doing a greater volume of business than its capital will allow, and is in an overexpanded position.

Some Neglected Reserve

The ratio "reserve for losses as a per cent of contingent liabilities" is a test primarily of accounting procedure, says the report. Contingent liabilities are created in the normal operation of the business, when a dealer discounts the notes or other receivables that he had taken as payment for the sales of his equipment. Some of these receiveables the dealer himself may eventually have to make good, and realistic accounting requires that such a contingency be provided for by setting up reserves on the balance sheet.

Yet, says the report, a surprising number of dealers do not set up any such reserves: less than 40% of the dealers in the sample acknowledged the exsistence of contingent liabilities, and only 57% of these reported the establishment of reserves to cover such contingencies.

Dealers who participated in the survey were divided into three groups, "small," "medium," and "large." Small establishments were defined as those having 1947 net sales of less than $200,000; medium, those having sales of from $200,000 to $500,000; and large, those over $500,000.

All three size groups averaged approximately the same rate of net profit, with only 1.2 points difference between the 6.8% profit of the small establishments and the 5.6% profit of the large ones.

Variations by Size

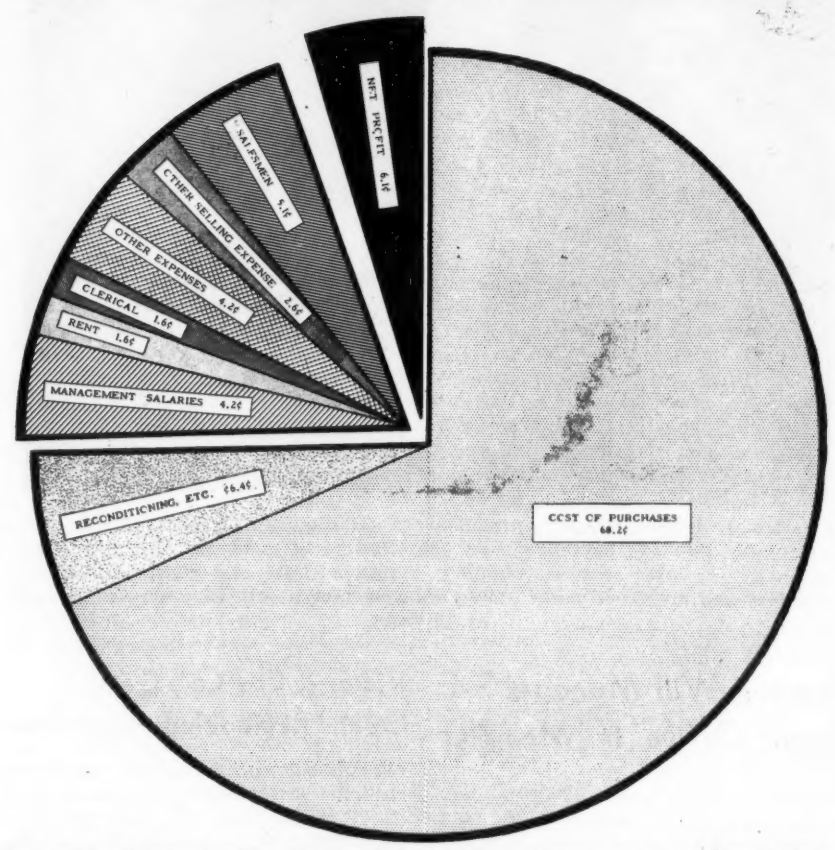
Most of the other operating items showed very little variation between size groups. Salesmen's compensation represented a larger percentage of sales for the large dealers (5.9%) than for the small ones (3.6%), while management salaries constituted a smaller percentage for the larger dealers than for the small. These two relationships may be interconnected, since in a small business the owner is likely to do some or all of the selling, in which case the charge is made to management salaries rather than to salesmen's salaries.

Table 2 may provide some clues as to why some dealers were more successful than others. In that table the dealers in the sample have been divided into three groups, according to the rate of profit earned, and separate sets of ratios are shown for each group.

The three groups are (1) a low-profit group, with profits under 4%, and including the few which showed

(Concluded on next page)

How the Sales Dollar Was Divided



For each dollar of sales of the dealers whose figures were analyzed, the above pie chart shows the average division for various items of cost, and the final net profit.

Table 1—Typical Operating Ratios of Commercial Refrigerator Dealers—1941, 1945, and 1947

Description of Concerns Analyzed	1941	1945*	1947
Number of concerns reporting	80	95	94
Aggregate net sales (000 omitted)	$10,073	$14,618*	$34,472
Typical net sales	$61,000	$94,000*	$250,000
Condensed Statement (% of Net Sales)			
Total net sales	100.0%	100.0%	100.0%
Cost of goods sold	71.1	68.1	74.6
Gross profit on sales	28.9	31.9	25.4
Total operating expense	25.2	21.5	19.3
Net profit (before taxes)	3.7	10.4	6.1
Detailed Expenses (% of Net Sales)			
Salesmen's compensation	6.8	4.2	5.1
Travel expense	2.4	2.5	1.3
All other selling expense	2.1	2.6	1.3
(Total selling expense)	(11.3)	(9.3)	(7.7)
Management salaries	6.6	6.2	4.2
Clerical salaries	1.9	1.8	1.6
Rent and building expense	1.9	2.0	1.6
All other administrative expense	3.5	2.2	4.2
(Total administrative expense)	(13.9)	(12.2)	(11.6)
Merchandising and Financial Ratios			
Annual sales per salesman†	$21,200	‡	$57,400
Selling expense per salesman†	$2,600	‡	$3,700
Per cent earned on net worth	17.1	39.7	35.7
Net worth turnover (times per year)	4.5	4.2	5.2
Working capital turnover (times per year)	6.2	5.0	6.5
Current ratio (to 1)	3.6	5.7	2.5
Reserve for losses as per cent of contingent liabilities	10.7	5.3	2.4

*The 1945 ratios apply to the first half of 1945; however, the aggregate and typical net sales figures for that year have been adjusted to a full-year basis.

†Including owners or officers engaged in selling.

‡Not available.

LET'S LOOK AHEAD!

Q....Which is the ONLY major appliance with an active market that hasn't approached saturation?

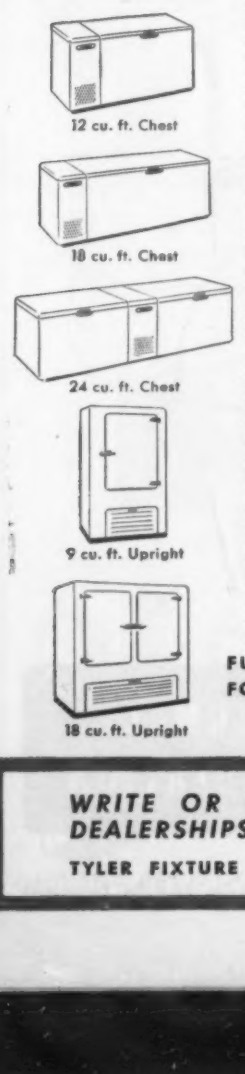
A... THE HOME FREEZER

Q....Which home freezer offers the OUTSTANDING VALUE in this profitable and promising field?

A... HARDER-Freez

There's a profitable future for you as a HARDER-Freez dealer or distributor—if your territory is not already covered. Outstanding value, based on a competitive price and top quality features and construction, explains the steady progress HARDER-Freez has made in 1945, 1946, 1947, 1948 and 1949—and promises continued progress in the future under an intensified sales program.

A line that's right to meet 1949 sales demands.



TOP QUALITY materials, construction, engineering, design—in a complete line you can sell!

COMPETITIVE PRICE—well below practically all other makes with comparable specifications.

OUTSTANDING FEATURES include Exclusive Center Plate Coil, Hermetically Sealed Compressor, Self-Balancing Lid, Pressure-Lock Hardware, Adjustable Dividers, Handy Freez-Basket, Temperature Indicator, Warning Signal, Recessed Base, 5 Year Warranty Plan. (Ice Cube Trays—optional.)

OUTSTANDING VALUE, more for your money, means bigger return on your sales efforts.

FULL LINE, both Chest and Upright models—sizes that sell, and offer adequate capacity.

SALES HELPS include effective literature, mailing pieces, stuffers, newspaper mats, dealer signs, and point-of-sale material to help you sell.

CONSISTENT NATIONAL ADVERTISING since 1945, influences the best prospects in your territory. The 1949 schedule includes *Better Homes & Gardens, McCall's, Saturday Evening Post, Field & Stream, Country Gentleman, Farm Journal.*

EXPERIENCED MANUFACTURER with over 20 years' background in the food refrigeration field. Tyler originated the welded-steel refrigerated Meat Display Case—has been a pioneer in home freezers.

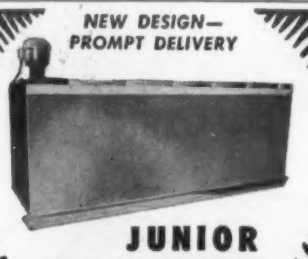
FUTURE PROFITS FOR YOU WITH—

HARDER Freez THE ECONOMICAL HOME FREEZER

WRITE OR WIRE ABOUT DISTRIBUTORSHIPS—DEALERSHIPS. YOUR TERRITORY MAY BE OPEN.

TYLER FIXTURE CORPORATION, DEPT. R-2 NILES, MICHIGAN

NEW DESIGN—PROMPT DELIVERY



JUNIOR ICE MAKING PLANTS

½, 1 and 2 TON CAPACITIES

All Steel, Shipped Assembled-Complete with Raceway Coils and Agitator. Available with Electric Motor, Gasoline or Diesel Engine Driven, Ammonia or Freon Refrigerating Units.

(Refrigeration Engineering Corp.)

RECO PRODUCTS DIVISION

2020 Naudain Street, Phila. 46, Pa.

1st in Performance

LEWIS Centrifugal PUMPS

serve industry for capacities up to 500 G.P.M. at medium heads...1½" to 3" pumps in standard or custom built designs.

CHAS S. LEWIS & CO., INC.

Manufacturers

22nd and Pine Sts., St. Louis 3, Mo.

Table 2—Typical Operating Ratios, 1947, Commercial Refrigerator Dealers, by Rate of Profit

Description of Concerns Analyzed	Low Profit*	Medium Profit*	High Profit*
Number of dealers reporting	30	33	31
Aggregate net sales (000 omitted)	$10,421	$13,050	$11,001
Typical net sales	$233,000	$349,000	$235,000
Operating Statement (% of Net Sales)			
Total net sales	100.0%	100.0%	100.0%
Cost of goods sold.			
Opening inventory	12.2	12.7	9.3
Purchases	71.8	73.6	70.9
Closing inventory	17.2	16.6	13.8
Reconditioning, installation, service	11.4	4.7	5.5
Cost of goods sold	78.2	74.4	71.9
Gross profit on sales	21.8	25.6	28.1
Operating expenses			
Salesmen's compensation	5.7	4.6	3.8
Travel expense	1.4	1.3	1.3
All other selling expense	1.3	1.6	1.4
(Total selling expense)	(8.4)	(7.5)	(6.5)
Warehouse and delivery expense	1.1	1.4	1.7
Management salaries	4.4	4.0	4.0
Clerical salaries	1.7	1.5	1.4
Rent and building expense	1.9	1.6	1.4
All other administrative expense	2.7	4.0	2.1
(Total administrative expense)	(11.8)	(12.5)	(10.6)
Total operating expense	20.2	20.0	17.1
Net profit (before taxes)	1.6	5.6	11.0
Merchandising and Financial Ratios			
Inventory turnover (times per year)	4.9	5.8	6.2
Annual sales per salesman†	$52,300	$57,400	$64,800
Selling expense per salesman†	$3,600	$3,700	$4,300
Per cent earned on net worth	11.2	32.2	52.3
Net worth turnover (times per year)	5.4	6.4	5.0
Working capital turnover (times per year)	6.8	7.3	6.3
Current ratio (to 1)	2.2	2.3	3.3

*In this tabulation, the profit groups are as follows: "low profit," less than 4%; "medium profit," 4 to 8%; high profit," 8% and over.

†Including owners or officers engaged in selling.

Commercial Dealers' Operating Experience--

(Concluded from preceding page)

losses; (2) medium-profit group, with profits of from 4 to 8%; and a high profit group, with profits of 8% and over.

The high-profit group reported both a higher gross profit and a lower total expense than did either of the other groups. Chief reason for the high cost-of-goods-sold ratio of the low-profit dealers was their reconditioning-installation-service item of 11.4%—more than double the figure reported by the more profitable groups.

The chief expense advantage of the most successful dealers was contained in salesmen's compensation and in "all other" expense, the latter possibly indicating the importance of close attention to miscellaneous costs, if profits are to be maintained at a satisfactory level.

Also significant are the high-profit group's greater efficiency of salesmen—as shown by the higher sales per salesman—and the better rate of inventory turnover.

To determine what differences characterized operations in large and in small cities, a breakdown was made which divided the participating dealers into two groups based on population. Fifty-five were located in cities with less than 200,000 population, and 39 were located in cities of more than 200,000.

Dealers in the larger cities showed a higher typical net sales. Operating expense totals were virtually the same for each group (19.2 for the small, 19.1 for the large), but the higher gross margins for the concerns in the smaller cities resulted in a slightly higher net profit for that group.

The report stated that no valid conclusion can be drawn from the differences in the operating or the merchandising and financial ratios from a tabulation on city size alone, since many of the variations seem for the most part to reflect sales volume differences.

To put the survey to work, the individual dealer should make up an "operating ratio work sheet" using the headings shown, and using the various lines in Table 1 (which would go down the left-hand side of the work sheet, of course).

The five steps then to be taken for an examination of the dealer's financial health, and comparison with typical averages, is as follows:

1. Transfer of the year's dollar figures to work sheet.
2. Computation of percentages.
3. Comparison of results with survey ratios.
4. Selection of "goal" ratios.
5. Preparation of budget.

How Dealer Enters Figures

In column 1 the dealer should enter actual operating experience figures for the dealer's most recent complete fiscal year. If expense classifications are different from those provided in Table 1, some combining and rearranging may be necessary. If the dealer wants to analyze his operations for the portion of the current year, he should fill in column 7 from the cumulative records of the current year to date.

Converting the dollar figures in columns 1 and 7 to percentages merely involves dividing net sales into each of the other operating items. Inventory turnover is computed by dividing cost of goods sold by average inventory (the average of beginning and ending inventories). These results should be entered in columns 2 and 8.

At the bottom of the work sheet the merchandising and financial ratios are listed, and space is provided for the insertion of actual and "goal" figures for the ratios. The actual ratios should be entered in column 2.

The next step is to select from the survey tables the sets of ratios most nearly representative of concerns similar to the one under analysis. (For this purpose it would be best to work with the manual, which gives ratios by size, group, etc., but for general purposes the dealer can use Table 2 which is reprinted here.) These sets of ratios should be recorded in columns 3 and 4.

Comparisons of the dealer's own ratios with those selected from the survey tables can then be made, and from his knowledge of the business, the dealer can determine which of the deviation's from the averages are to his advantage or disadvantage.

Selecting 'Goal Ratios'

"Goal ratios" should be selected which seem reasonable and attainable in the light of the dealer's practical experience, and the survey's records. The cost-of-goods-sold ratio should be selected only after careful consideration of local competitive conditions. An expensive location or considerable free service may indicate a need for a gross profit above the "typical," but tough competitive conditions on the other hand may limit the margin.

The goal ratios should be entered in column 5. The sum of the individual expense items must equal the total expense ratio, which, plus profit and cost of goods sold, must equal 100%, and this may take some trimming and adjusting.

A budget based on the "goal" ratios thus selected can be set up for future operations. The work sheet provides for both an annual and a monthly budget. From the dealer's experience to date, an estimate should be made of the total volume of sales expected during the current year, and entered at the top of column 6. Multiplying this estimate by the ratios from column 5 will produce the figures to be recorded in the rest of column 6.

Then the dealer should determine his estimated sales volume and projected expenses for the remainder of the current year by subtracting each item in column 7 from the corresponding item in column 6. The results should be entered in column 9.

The next month's budget can then be set up in columns 10 and 11.

Form for Dealer's Use In Comparing His Figures with Survey

1	2	3	4	5	6	7	8	9	10	11
Operating Experience Last Fiscal Year		Standard Ratios From Table—Col.—	Table—Col.—	Current Fiscal Year "Goal" Ratios		Actual Experience Current Year to Date		Remainder of Current Fiscal Year	Next Month (Budget)	
Dollars	% of Sales	% of Sales	% of Sales	% of Sales	Budget Dollars	Dollars	% of Sales	Dollars	% of Sales	Dollars

Retailers, Wholesalers Sponsor Nashville Sales Training Clinic

NASHVILLE, Tenn.—An advanced sales training clinic conducted by Jack Lacy, Lacy Institute, under sponsorship of wholesale and retail sellers in this area will be held Feb. 12 and 14 in the main dining room of the Hermitage hotel, according to an announcement by the Nashville Electric Service. Cost of the sales training course will be $15 per person.

Williamson Appointed To Represent Koch In Southwest Area

NORTH KANSAS CITY, Mo.—B. K. Williamson will act as representative for Koch refrigerators in the Southwest area, including the territory immediately south of the Koch factory here, the Koch Refrigerator Co. announced recently. Williamson's headquarters is in Webster Groves, Mo.

B. K. Williamson

Williamson has been in the refrigeration industry since 1922, beginning with the Valley Engineering Co. of Dayton, Ohio. He later served as vice president in charge of sales with the Everite Co. of Dayton; as district manager in seven midwestern states for the Trupar Mfg. Co.; and as sales representative for Weber Fixture Co., the company announcement said.

For a time, Williamson was president and general manager of Trupar, Inc., a subsidiary of Trupar Mfg. Co., and he still retains an interest in this organization.

Glasco Appoints Distributors In New York and Sioux City

CHICAGO — New distributors in New York City and Sioux City, Iowa, to handle sales of Glasco table-top refrigerators in their respective territories have been announced by James H. Rasmussen Co., national sales representative.

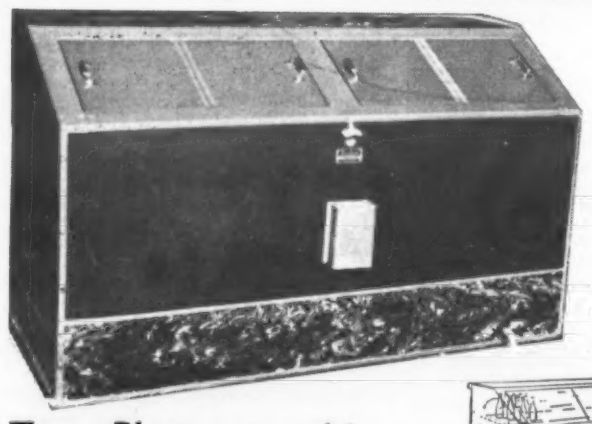
International Industries is the name of the New York firm and Knapp & Spencer is the Sioux City organization.

FIRST in the field...
JARROW PRODUCTS
NEW
SPEED-ANGLE CHARGING HOSE

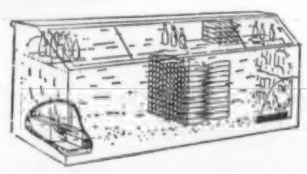
*NAME COPYRIGHTED

Speeds up charging and purging. No flexing necessary. Hose life is prolonged by eliminating sharp "right-angle" bends. Gasket cannot blow out.

JARROW PRODUCTS
420 N. LA SALLE ST. CHICAGO 10, ILLINOIS



Patented
No. 2,442,719



Zero Plates as cold as
6 degrees below
ZERO

With air at BLIZZARD Speed, Cools Beverages faster than any other cooler.

Yet a control keeps the beverages at the exact desired temperature.

34 case complete with ½ compressor unit
List $736.60

Dealers Wanted

Manufactured by

ZERO-PLATE CO.
1400 S. HASKELL AVE.
DALLAS, TEXAS

JOE BOOTH CO.
901 COLLARD ST.
FORT WORTH, TEXAS

TOP SELLING LINE FOR '49
DAIRY WALL CASES • FREEZERS • SELF SERVICE CASES • FULL VISION CASES • VEGETABLE CASES • SELF-CONTAINED OR REMOTE
COLD-IN
YOUR KEY TO BETTER REFRIGERATION
COLDIN CABINET CO., INC.
2800 Webster Avenue, Bronx 58, N. Y.

insist on genuine
Marlo
products
MARLO = HEAT TRANSFER
Since 1925

It costs no more to buy a top Compressor brand
PAR

When the customer says: "I want top refrigeration efficiency—and don't spend all my money on it"—that's your cue to install PAR.

PAR compressors are not only engineered with most of the recent refrigeration improvements and give maximum B.T.U. output per dollar but popular pricing means everyone can afford a top brand.

Whether your problem happens to be a cold box, storage room, freezer or an air conditioning system, there's a correct size PAR unit, air or water cooled, standard or heavy duty, to accomplish the job.

For the complete story about PAR's top compressor efficiency, see your nearest Dealer and ask for an illustrated folder showing all of the PAR line.

BY COMPARISON — YOU'LL BUY PAR
PAR AIR COMPRESSORS
PAR REFRIGERATION COMPRESSORS
WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES
LYNCH CORPORATION
PAR COMPRESSOR DIVISION
TOLEDO, OHIO
MORPAC PAPER PACKAGING MACHINES
MORPAC BUTTER & OLEO CARTONING MACHINES
GLASS FORMING MACHINES

WORLD TRADE NEWS

How Much Refrigeration Equipment Can U. S. Mfrs. Expect To Sell In Argentina?

By Eugene Hesz, International Market Analyst

The goal of this article is the attempt to find out what a normal export of air conditioning and refrigeration equipment from the United States to Argentina might amount to. It is therefore necessary, after having sketched the economic-political difficulties of today in a preceding study, to take a good look at the exports and imports of Argentina before and after the last war.

In 1938, the last normal year before World War II, the total exports from Argentina amounted to a total of about $322,000,000. In 1939, the total was $361,000,000, of which about 44% consisted of products of the pastoral industry, including $76,000,000 worth of meat.

This latter figure is of particular importance since a great part of this meat was frozen. The direction of exports in 1938 and 1939 is shown in the accompanying table.

The coming shift is already clearly evident: The United States is moving ahead, whereas certain European countries are losing ground, partly a direct effect of the war.

* * *

Normal Exports of Argentina by Countries of Destination

Country	% In 1938	% In 1939
United Kingdom ..	32.8%	32.9%
United States	8.5	11.9
Netherlands	7.4	7.3
Belgium	7.4	6.5
Germany	11.7	5.7
France	5.4	4.7
Brazil	7.0	4.2
All others	19.8	26.8

1948 cannot be taken for a correct comparison, as the figures are not yet completely available, but more so on account of the latest economic developments in Argentina. 1948 shows a number of artificial influences, brought about by economic policies.

In 1947, the total picture was better than a normal average. A comparison shows that the total exports amounted to about $1,375,000,000. This figure is artificially boosted by the inflationary rise of all prices.

Destination statistics show that the United Kingdom is still leading with 30% of the total. The United States' figure is 10%, Spain's about 6%, and Belgium and France each received a little under 6%.

FROZEN MEAT EXPORTS

The main exports of frozen meats are going to the United Kingdom, followed by other European countries. In 1948, the export of frozen meat to England, which was to reach 400,000 tons, amounted only to 335,000 tons. This was because the official export agency preferred exporting relatively larger quantities to Belgium and the Netherlands, where higher prices could be reached.

Imports in the years 1938-1939 were, roughly speaking, about the same as exports. They consisted mainly of all sorts of fuels, many types of machinery, motors and automobiles, chemical products, newsprint, lumber, and many other capital and consumer goods.

In 1947, Argentina's imports were somewhat lower than exports, amounting altogether to $1,337,000,000. The main items were vehicles (ca. 25%), other iron and steel products including machinery (over 12%), textiles and manufactures (over 16%), fuels and lubricants (7½%), and chemicals (nearly 6%).

The countries which delivered these large imports into Argentina have been led by the United States, with the large amount of $608,000,000, equal to more than 45% of the total. Second was the United Kingdom with nearly 8½%, followed by Brazil with about 8%, Italy with over 5%, and Sweden with 3½%.

The above figures show the changes which have taken place, especially with regard to the countries participating in the foreign trade. Also, the large role of the United States is evident and forms a telling proof of the urgency, in the interest of a return to a more normal business life, to eliminate rather than create new trade restrictions.

1947 REFRIGERATOR IMPORTS

The 1947 exports of electric and gas household refrigerators from the United States to Argentina give a picture of the enormous demand—partly created by lack of supplies during the war years. But they also demonstrate the artificial obstacles which prevent free flow of trade.

Shipments in the first seven months of 1947 were on a comparatively large scale. Then came government action in Argentina—mainly the refusal to grant foreign exchange—which cut imports.

However, American exporters were able to land from January to December, 1947, about 27,000 complete electric refrigerators. Another 10,000 electric refrigerators were assembled in Argentina from American parts.

This production was lower than the capacity of the assembly plants as there was not enough steel available for the cabinets. Installations of central refrigeration plants for apartment houses were lower than in the preceding year, for the same reason.

For the most part, compressor units continued to come from the United States; local manufacture increased slightly in 1947, compared to 1946. Several new apartment houses and office buildings were equipped with air conditioning and there were numerous sales of so-called packaged units to be used in offices, banks, hospitals, and stores. Most of this equipment also came from the United States.

Before drawing conclusions from the above figures, it is necessary to review in short the Argentine air conditioning and refrigeration industry and the imports connected with this industry.

Production through assembly in pre-war years averaged between 7,000 and 8,000 units of complete mechanical electric refrigerators a year. Consumption just prior to the war was about 8,000 units a year.

Argentina has at present three main assembly plants with an estimated production capacity of 16,500 units a year, calculated on a double shift. The labor market, the steel shortage, and the import restrictions make full use of this potential impossible.

NEED 20,000 UNITS YEARLY

The actual need of finished units should be at present in the neighborhood of 20,000 units a year, which is lower than the imports in 1947, but appreciably more than what will probably be assembled in 1949. The real demand in an average year might vaccilate—according to an estimate by our Department of Commerce—between 12,000 and 15,000 units, completely finished, automatic electric refrigerators.

The situation for compressors for air conditioning or larger refrigeration equipment is, of course, different. Total imports in 1938 amounted to an equivalent of only $90,000; in 1939 to $100,000; in 1940 to $126,000; and in 1942 to $220,000. In those years, the United States delivered between 90 and 98% of these compressors to Argentina.

The above figures give an outline of the actual demand of the country. The market has been, prior to the latest economic-political troubles, dominated by American and British manufacturers. It had already become highly competitive.

An American manufacturer thinking of going into this market would do well to make a first-hand study on the spot, which will probably convince him that Argentina will continue on the road of industrialization, which means for our industries that it will continue assembly. A local study will probably also reveal that the demand for new dwellings, apartment houses, hospitals, and office buildings looks bright and seems to offer a broad field for the application of refrigeration and air conditioning.

Special attention in such a survey should be paid to the shopping habits of the Argentine population. Up to a short time ago, food was bought on a day-to-day basis, not on a weekly basis as in the United States. Thus, it will be understood that the favorite size of domestic refrigeration units was the 4-ft. box, with the 5-ft. size running a close second.

NOW HEAR THIS!

Again a warning must be issued. American exports to, or the construction of new assembly plants in Argentina make sense only if the general policies of our southern neighbors take a decided turn for the better. That the economic policy which must be described, to use a mild term, as discrimination against this country, has become untenable, was recognized by our government some time ago.

Argentine foreign trade authorities were of the opinion that this country and western Europe need Argentine products so badly that the American consumer dollar and the huge funds of the Marshall Plan would permit Argentina to continue her one-sided political foreign trade direction.

The sums involved are enormous, as the unsold stocks in the hands of the IAPI, the official Argentine foreign trade authority, amount to more than one billion dollars.

Washington waited in vain for a compromising gesture, such as the admission of parts for assembly from this country to the Argentine plants, or the permission for at least a moderate remittance of profits made by American firms, operating in Argentina, to the home country. Since nothing happened, the Marshall Plan authorities are buying elsewhere and we are still waiting for reason to return.

The enormous lands of Argentina consist mostly, in the northern fourth, of tropical forest and scrub forest. In that part, modern civilization has only partly penetrated.

The center of the country and the part adjoining the center towards the south, consist of the famous pampa containing the enormous cattle ranches and wheat and corn farms which form the economic backbone of the country.

BUENOS AIRES IMPORT CENTER

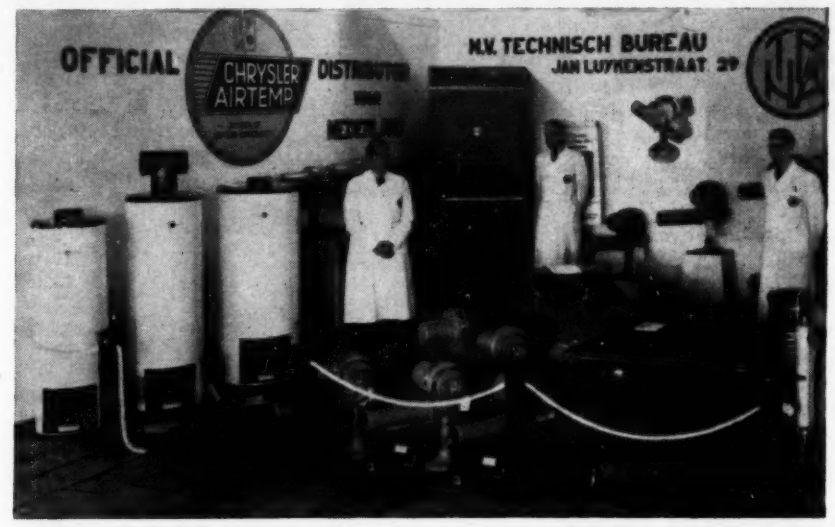
The more valuable regions of the pampas are situated in a very large half-circle around the city and province of Burenos Aires. The fruits of all this work stream into the metropolis, Buenos Aires, with a certain part being diverted to Rosario on the Parana river.

Buenos Aires and the harbor of La Plata itself still dominate the picture and form together one of the 10 largest seaports of the world.

It is therefore clear—especially when considering that out of a total population of 16 million nearly one quarter is concentrated in the city of Buenos Aires—that the city and province of the same name contain 80% of the importing interests of the country. The balance is nearly completely taken up by the city of Rosario.

But these facts should certainly not deflect attention from the very important agricultural and industrial interests which have been assembled and are still growing in the northwest of Argentina. A good part of foreign machinery finds its way to such new centers of production as Tucuman, Salta, and Santiago, where much of the Argentine sugar and fruit canning industry is concentrated.

Airtemp Products Bow In Holland



That the standard prewar European custom of holding elaborate trade fairs is being revived is evidenced by this photograph taken at the 1948 Utrecht Fair in Amsterdam. Picture shows a corner of the booth in which N. V. Technisch Bureau, Chrysler Airtemp distributor for the Netherlands, displayed packaged air conditioning units, condensing units, and other items. Firm is owned by J. Vennik. It was the first public showing of Airtemp products in Holland.

Dutch Firm In New Quarters

ROTTERDAM, Netherlands — The firm of Technisch Bureau Kobach, Handelmaatschappij and Ingenieursbureau, distributor of Westinghouse air conditioning and refrigeration equipment and importer of woodworking machinery and tools, announces that it has moved to larger quarters at Piekstraat 20, Rotterdam-Z, Holland.

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NOISE and VIBRATION

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THE NEW PACKLESS VIBRATION ABSORBER
especially designed and manufactured for the specific needs of the air conditioning and refrigeration industries.

Noise from excess vibration, caused by pulsating gases or liquids throughout any system, *is* entirely eliminated by the design of the Packless Vibration Absorber. In addition, these Vibration Absorbers absorb line shock and prevent damage and resultant service interruption from broken refrigerant lines. Unconditionally guaranteed on all rated applications when properly installed.

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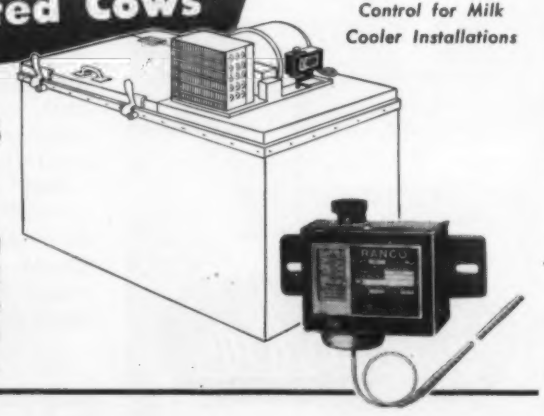
Ranco Type 0-1414 Control for Milk Cooler Installations



Ranco Inc.
COLUMBUS 1, OHIO

World's Largest Manufacturers of REFRIGERATION CONTROLS

'County Fair' In Store Has Customer Appeal

Patrons attending 'Fair' at Caldwell's.

* * *

Rural Groups, Invited To Use Eastern Dealer's Store, Turn Out To Be Prospects for His Home Appliances

WASHINGTON, Pa. — Holding a county fair in his own store proved to be a profitable venture for Edward Gomien, manager of Caldwell's here.

His wife, who had wide contact with the granges in the area, suggested the idea of inviting these and other organizations to exhibit their quilts, farm produce, and other items in the store.

As part of the fair, the store arranged for cooking demonstrations on electric ranges, with home economists from the West Penn Power Co. presiding. The cooking school was included in radio and newspaper advertising of the fair. Even the store's public address system was used to boost the event.

Response was considered good, as six women came in to see the range before the cooking school started, 53 attended the demonstration, and several sales were made. A number of prospects were also secured for the dealer's follow-up.

1948 Vacuum Cleaner Sales Drop Off 11.6%

CHICAGO—A total of 3,361,149 standard sized household vacuum cleaners were sold during 1948, down 11.6% from the record 3,800,687 sold in 1947, C. G. Frantz, secretary-treasurer of the Vacuum Cleaner Manufacturers Association, has announced.

Factory sales in 1948, he added, were better by the same percentage than the total sales of both 1940 and 1941.

December factory sales totalled 274,180 units which was 7.5% ahead of November, but 26.6% behind December, 1947. December, 1947 was the industry's record month with 373,254 vacuum cleaners sold.

Cincinnati Dealership Moves

CINCINNATI—The Standard Heating & Appliance Co., formerly located at 4931 Paddock Rd., has moved to 3204 Linwood Rd. in suburban Mt. Lookout.

Supermarket Chain Opens 12th Appliance Department

HOUSTON, Tex.—A food supermarket chain with 18 stores here recently opened its 12th major appliance department in its newest outlet at Wayside and Telephone roads.

The chain, Henke & Pillot, Inc. also has three appliance departments in stores located in other southeastern Texas cities and plans more in its current $2,500,000 expansion program, M. I. Koppel, secretary, declared.

The newest department, occupying 500-sq. ft. of space, carries several name brands of refrigerators, washers, ranges, ironers, and radios.

It is stationed against a blue green curtain wall that harmonizes with backwalls of checkerboard gray.

The department is afforded a permanent window display and has units stationed in the flow of traffic to meat, vegetable, and grocery departments.

Large scale appliance newspaper advertising is carried by the firm.

Frank & Scanlan Distributes Tracy Line In Chicago Area

PITTSBURGH — Tracy Mfg. Co., here has announced appointment of a new wholesale distributor in the Chicago area—Frank & Scanlan, Inc. William Scanlan is president of the distributor organization and Walter Frank executive vice president.

Memphis Dealer Group Gets Jenkins as Head

MEMPHIS, Tenn. — William R. Jenkins of Jenkins-Leach, Inc., has been installed as president of the Memphis Retail Appliance Dealers Association, succeeding John Davidson, of the John Gerber Co.

Serving with him will be: Norman Brown of Somers-Brown, vice president; Charles Mendricks of Memphis Refrigeration Co., secretary; and George Nash of Winn Appliance Co., treasurer. The board of directors includes Sam Hollis, L. E. Gatlin, Ben Gruber, J. E. Qualls, and Wallace Johnston.

Committees appointed to serve during 1949 include:

Membership, Harry Welford, chairman, C. D. Akers, Jr., Jimmy Archard, George Uetz, and Jimmy Leach; ethics and policy, Qualls, chairman, Pete Barnes, William H. Armstrong, Akers, and Verne Littig.

Legislative and licensing, Simon Kaset, chairman, Billy Wolf, J. W. Young, and Davidson; publicity, G. W. Sipe, chairman, Nash, and Barry Gallagher; entertainment, John Camp, chairman, Pete Shiro, and George Adair, Sr.

Booklet Offers Ideas For Dishwasher Sales

CHICAGO — A new dishwasher sales promotion plan book, part of a continuing program "to build dealer profits through increased sales of 1949 dishwashers," has been developed by Hotpoint, Inc.

The booklet tells the dealer how to use a dishwasher demonstration package, a national advertising reprint holder, a direct mail plan designed for use in any market, a gift certificate plan to promote the giving of Hotpoint appliances on special occasions, suggested displays for floor or window, giveaway items, contest ideas, and newspaper advertisements and radio spot announcements.

The dealer can stimulate consumer interest in the dishwasher by conducting essay or guessing contests, the plan book says. By offering a suitable prize, the dealer can build interest in his store and his product, at the same time developing a list of good prospects.

POSITIVELY WILL NOT CLOG

"Cross-Flo" DRIER-FILTERS

Eliminate pressure-drop troubles with Cross-Flo Drier Filters' exclusive new principle of flowing the refrigerant uniformly and slowly across a thin, cylindrical drying-agent bed instead of forcing it thru a long powder-clogged bed. Capacities: Liquid Line—¼ to 7½ HP; Lowside—¼ to 15 tons (Freon 12); Suction Line—⅜ to ⅞" OD.

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Larkin refrigeration products are modern proof that engineering beauty can add to functional efficiency. Originator of the Cross Fin Coil, Larkin also produces highest quality in Humi-Temp Forced Convection Units—Bare Tube and Zinc Fused Steel Plate Coils—Evaporative Condensers—Air Conditioning Units—Instantaneous Water Coolers—and other superlative equipment for commercial and industrial refrigeration.

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Revere Dryseal Tube comes in sizes from ⅛" to ¾" O.D., and is packed two 50-foot coils to a package.

Next time you buy refrigeration tube, ask your Revere Distributor for Revere Dryseal—the easy-to-bend copper refrigeration tube that assures you of fine quality in every length you buy.

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The Oil Separator

By Reducing Formation of Film and Sludge, by Preserving Heat Transfer Rate, It Acts as Refrigeration System 'Trouble Shooter'

By C. Dale Mericle

DETROIT—Function and design of oil separators, when and where they should be installed, and how, were brought out during a recent meeting of the Greater Detroit chapter of the Refrigeration Service Engineers Society when Earl Jennings, service manager of Temprite Products Corp. and Ed. Kellie, president of Aminco Refrigeration Products Co. participated in a symposium.

Moderated by Jack Baragar, president of the chapter, the meeting brought forth questions from the chair and floor, such as "what is the purpose and function of an oil separator?"

"The original purpose," Kellie explained, "was to keep the oil in the crankcase at the proper level. But for the past 15 years we've been telling the story differently. The oil separator keeps the oil out of the system.

"First, oil goes into solution with the 'Freons' and methyl chloride. A film can form on the condenser and cut its efficiency. Second, sludge can form in dryers and cut their efficiency.

"Third, in evaporators, oil can be deposited on walls, and in the form of bubbles is an excellent insulation affecting the heat transfer rate. Fourth, oil plastered on the walls of the suction line affects any temperature control device fastened to the suction line, possibly causing frostbacks, or with expansion valves, 'hunting.'

"An oil separator prevents the transfer of oil from the compressor out into the system and therefore keeps the system and its components at their full efficiency and improves the volumetric efficiency of the compressor," Kellie said.

The next question—"how is an oil separator constructed?"—was directed at Jennings, who commented:

"The oil separator, which is located on the high side between the compressor discharge and the condenser, is in the form of a cylinder or a shell. At the top there are two connections, one to the compressor and one to the condenser.

"There usually is a screen at the entrance, or some other means, to separate the oil from the refrigerant vapor and let it drop to the bottom of the cylinder, where there is a float valve. When the float rises high enough, a needle valve opens to let the accumulated oil flow into the oil-return line connected to the crankcase of the compressor."

Where To Install?

Answering the question of "where should an oil separator be installed?" Kellie explained:

"It should be in the high side between the compressor and the condenser. It's impossible to remove oil from liquid refrigerant. Generally, the oil separator is mounted as close to the compressor as convenient so that the entering gas may be as hot as possible.

"Mount it so the device is not in the slipstream of the compressor flywheel, if the latter has fan-blade spokes. You want to have the shell as hot as the entering gases during the running cycle. If the shell of the oil separator gets too cold, refrigerant will condense. To avoid this problem additional insulation can be placed on oil separators, but if you do add extra insulation, be sure to paint it to seal against moisture."

How to charge a system equipped with an oil separator was outlined by Jennings:

"The drum should be connected to the opening in the suction shut-off valve and refrigerant fed to the system in the vapor state. You don't always have to put it in as vapor, because there are exceptions to this general rule. When first installing an oil separator, a charge of oil should be put in.

"Some people have closed the suction shut-off valve and pumped oil from the compressor. In doing this you may also pump bearing chips, etc. from the crankcase that might interfere with the seating of the needle in the float valve of the separator.

"We also suggest that you put the whole refrigerant charge in the system before opening evaporator valves. There might be a considerable quantity of oil in the receiver on new jobs, as much as a pint perhaps, but by putting in the full charge of refrigerant, the oil in the receiver will be greatly diluted."

Is the suction pressure affected when the oil separator returns oil to the compressor? This was answered by Kellie as follows:

"It may be affected momentarily, but you can hardly see the effect on the gauge when the separator returns oil to the crankcase. The needle valve opens with a ¼-in. rise in oil level in the separator, and the amount of oil returned usually raises the oil level in the crankcase 1/16 in.

Sludge Holds Needle Open

"If an oil separator is put on an old system filled with sludge, the needle may be held open by the sludge, allowing all the oil to run out and permitting the refrigerant to leak back to the crankcase and lowering the suction pressure. We advise that hand shut-off valve be placed between the oil separator and compressor to permit easy checking or removing of the oil separator.

"On an old system you may have lots of oil in it. After installing an oil separator it is best to check and remove excess oil if there is any."

Another pair of questions that came up was: "Is an oil separator essential on every application and are there any applications where an oil separator must be used?"

Said Jennings, "Wherever you have a job in which there are 'traps' in the evaporator and oil has to be lifted up into the suction line, you practically have to have an oil separator. There might be an exception to this if the compressor carries over only a minimum of oil. Also, with a continuous single-pass evaporator and a properly designed compressor, an oil separator may not be necessary."

Separator Vital In Low-Temp

"One application where the oil separator is a must is in low temperature work," Kellie added. "It is practically impossible to get down below -35° F. without an oil separator. Waxing is one problem that occurs with many oils if they are allowed to get over into the system under these low temperatures. Most oils also become like vaseline at low temperature and thus interfere with the operation of the system."

As for the question "are there any applications where oil separators should not be used?" Kellie replied:

"The oil separator should not be used on any system that can operate economically without it, such as a domestic machine, where the possible savings in operation costs would be too small to pay for the oil separator.

"If an increase in efficiency of anywhere from 10% to 34% is not important, or if the system operates satisfactorily without it, then don't put on an oil separator. Of course, you may find systems where only 1% oil is carried over from the compressor most of the time, but this figure may reach 57% on some occasions. Whether to use an oil separator or not depends on the application and economics of the question."

Cause of Flattened Floats

Baragar then brought up the point that "we have taken oil separators apart and found the floats flattened out. What causes that?"

"These floats," said Jennings, "are tested at 600 lb. pressure or above. The conclusion is that you've had pressures higher than that in the system."

Baragar: "But most machines have high-pressure cutouts set for 175 lb. that should stop the machine when the pressure reaches that point."

Jennings: "It takes time for the cut-out to stop the machine. If a hydraulic pressure condition should develop, it might last for only a fraction of a second, too soon for the high-pressure cutout to stop the unit."

Kellie added the point that "some years ago studies by a Rema group indicated that a momentary hammer effect or hydraulic ram effect in a refrigeration system could reach as high as 2,000 lb. pressure or more."

Questioned as to the performance of an oil separator with a high-speed compressor, Jennings said that it "performs normally, but the operating conditions of the system, such as the oil level in the crankcase, have to be correct."

He cited one case of a high-speed (1,500 r.p.m.) compressor on a mobile unit where "before an oil separator was installed the pressure drop in the suction line was 8 lb., but after the installation the pressure drop was only 3 lb."

Are oil separators needed on SO_2 systems?

"Because sulphur dioxide and oil have no affinity for each other, an oil separator is not essential on such a system unless the compressor is pumping oil," Kellie declared.

Should the oil separator be installed above the level of the crankcase?

"It doesn't really matter, unless you don't want to have the oil-return line from the separator to the compressor full of oil. Pressure difference, not gravity, is what forces the oil from the separator to the crankcase."

"Always return oil from the separator to the crankcase, not to the suction side," Jennings emphasized. "Also, avoid letting the returning oil surge into the controls."

Application of oil separators to truck refrigeration units brought up the point from Kellie that "at first there was some fear that the constant bounce of trucks over roads might pound the needle in the orifice, but it hasn't worked out that way. The oil in the bottom of the separator serves as a cushion which takes up the shock in a vertical plane. Shocks in the lateral plane, and that's what most road shock is, have little if any effect on the needle and seat."

3 Charter Buffalo Firm

BUFFALO—Buffalo Refrigeration Equipment Co., Inc., has been incorporated here with capital of 200 shares. Incorporators are Joseph Cohen, Evelyn Pinkowski, and Carmella Tavernese.

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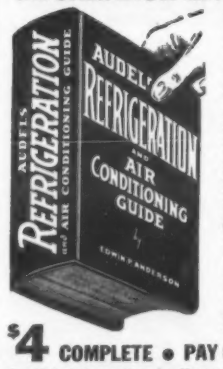

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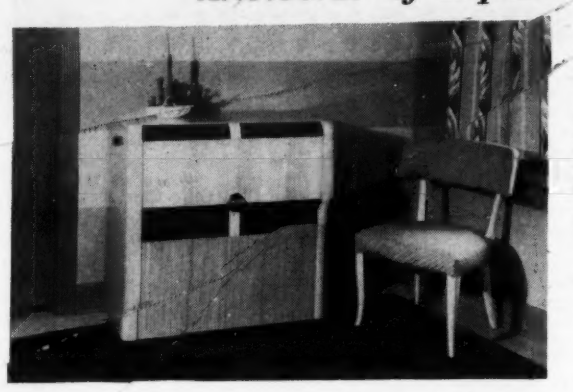


LEFT: The Aristocrat, largest of the 1949 line of Remington air conditioners, appears in an artistic setting. It was shown for the first time at the ASHVE Exposition in Chicago.

* * *

Remington Offers 10 Models for 1949--

(Concluded from Page 1, Column 4)

made their bow at the Heating & Ventilating Show.

Featured among the most interesting of the new Remington models is the Overton (model 12), a 1¾-hp. air-cooled console unit, intended for the largest rooms and most severe conditions. It offers a cooling capacity of 12,300 to 13,500 B.t.u. per hour. Heating is optional at 7,000 B.t.u. per hour. The Overton is distinguished by its imported wood cabinets, in the buyer's choice of either traditional mahogany or blonde avodire. It is available for a.c. or d.c.

The Remington Director (model 10), a 1¼-hp., air-cooled console unit, is the 1949 successor to the previous model 10 Deluxe, improved by the addition of a separate evaporator fan motor to eliminate one belt drive, and by raising the duct connection to adapt the unit for higher window sills and easier service.

The Director model offers a cooling capacity of 10,000 to 11,000 B.t.u. per hour, with optional heating capacity of 7,000 B.t.u. per hour. The cabinet is hand-rubbed imported mahogany. Unit is available for a.c. or d.c.

In order to provide a complete range of capacities, Remington will present for the first time in 1949, two window units. The Bedfellow (model 6), a ½-hp., air-cooled model, is featured for bedroom cooling, with a capacity of 5,500 to 6,000 B.t.u. per hour, which the manufacturer claims is the maximum offered by any ½-hp. unit. For 115 volt, 60 cycle current, the Bedfellow is offered in a two-tone cabinet in genuine mahogany and blonde wood.

Remington's other window unit, the Professional (model 8), will be featured for professional and business offices and master bedrooms. It is a ¾-hp., air-cooled type with cooling capacity of 8,000 to 8,800 B.t.u. per hour, for 115-60-1, 230-60-1, or 230-50-1 current. The Professional is available in choice of two fine wood cabinets, either genuine mahogany throughout or blonde avodire throughout.

For interior rooms, or installations requiring greater capacity than available in air-cooled units, Remington will offer two water-cooled models. The Fullton (model 10W) is a 1-hp. unit with cooling capacity from 11,000 to 12,000 B.t.u. per hour, and except for being water cooled is identical with the Director model. The Aristocrat (model 12W) is also water cooled, but in other respects is similar to the Overton (model 12). With 1½-hp. unit, the Aristocrat has a cooling capacity of 13,700 to 15,000 B.t.u. per hour, making it the most powerful unit in the Remington line.

Remington will also offer four models of "Climate Controllers," 1 hp. to 1¾-hp. units, air or water cooled, for installation remote from the conditioned space with duct connections, or where decorative cabinets are unnecessary, as in laboratories, tool rooms, and the like. Except for the absence of cabinets, these Climate Controllers are identical with Remington models 10, 10W, 12, and 12W.

Scientists Find Air Cooling 'Shock' Complaint Unfounded

(Concluded from Page 1, Column 4)

that the complaint against 'shock' caused by air conditioning came from the man who didn't want to install it anyway."

The physiological adjustments of ten healthy, male medical students and 16 cardiac patients were compared on exposure to sudden change in environmental temperature. The medical students ranged from 19 to 29 years (average 23 years), the cardiac patients were from 25 to 72 years old (average 57 years).

The results of the research indicated "that the observed responses of cardiac patients on exposure to sudden changes in environmental temperature were similar in most respects to those of young normal subjects. The few definite differences that did appear may represent differences which would have been observed as a result of the aging process in relatively normal individuals."

The experiment was conducted by five members of the University of Illinois Department of Medicine: Dr. Robert W. Keeton, department head; Nathaniel Glickman, assistant professor of medicine and research physiologist; Tohru Inouye, research assistant; Dr. Irwin R. Callen, instructor in medicine; Dr. Ford K. Hick, associate professor of medicine; and Maurice K. Fahnestock, assistant director, Engineering Experiment Station, department of mechanical engineering. Glickman presented the paper at the ASHVE meeting.

The test subjects (dressed in thermocouple union suits) remained in a comfortable room for one hour and then entered a hot room for one hour after which they returned to the comfortable room for one hour.

Observations taken included skin and rectal temperatures, evaporative weight loss, time of onset of perspiration, blood pressure, pulse rate, and subjective sensation of warmth or coolness. The scale for the subjective sensation of comfort was: 1-cold, 2-cool, 3-slightly cool, 4-comfortable, 5-slightly warm, 6-warm, 7-hot. The subjects were trained in the use of the comfort scale before starting the experiment.

The comfort room was maintained at a constant dry-bulb temperature of 76° F. and a water vapor pressure of 0.356 p.s.i. corresponding to a relative humidity of 80% and an effective temperature of 73.4. The hot room was maintained at a dry-bulb temperature of 98.5° F. and a water vapor pressure of 0.599 p.s.i. corresponding to a relative humidity of 66% and an effective temperature of 90.2.

The research scientists declared that "there appeared to be no greater stress on the cardiovascular system of the cardiac patients than that of the normal subjects as measured by changes in the pulse rate. The cardiac patients had less of an increase in pulse rate on entering the hot room, less of an over-all increase during the hot room exposure and less of a decrease on re-entering the comfortable room."

No significant differences were found, they stated, between the normal subjects and cardiac patients in the final rectal temperature, final comfort vote, final pulse rate, and average rate of evaporative loss. The blood pressure was significantly higher in the cardiac patients, but this was anticipated, said the scientists, because of the large difference in age.

In comparing the skin temperatures of various segments of the body for both groups, only the temperature of the foot was found to be significantly different.

After one hour in the comfortable room, the temperature of the heel and toe averaged 91.6° and 88.9° F., respectively, for the normal subjects and 84.2° and 85.1° F., respectively, for the cardiac patients. After an hour in the hot room, it averaged 97.9° and 97.3° for the normal subjects and 96.4° and 94.6° for the cardiac group. After returning to the comfortable room and remaining there for one hour, however, only the toe temperature was significantly lower for the cardiac patients (90.7° as compared to 88.2°).

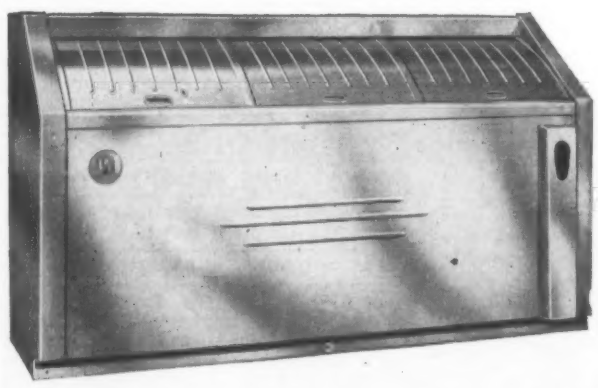
This lower temperature of the foot for the cardiac group "probably represents vascular changes incident to their disease and their age," the researchers said, adding that "their blood vessels do not dilate as readily as do those of normal subjects."

One of the authors of the papers, M. K. Fahnestock, cautioned that "this paper is not the entire answer to the question of people going from one environment to another. There are various kinds of cardiacs, and it's a complex problem. We've said nothing about radiation effect, for example. You're still going to have normal people who may have strong reactions to changes."

Charles Leopold countered this remark with the statement: "We all know that there are changes in the environment that can be serious. The range of temperatures shown in this paper, however, are greater than those used in air conditioning."

Added Nathaniel Glickman, "Other studies of greater temperature differences, which will be reported on in the future, indicate there may be some few people who are affected by the shock, but they are in a minority."

AGAIN-*La Crosse* LEADS!



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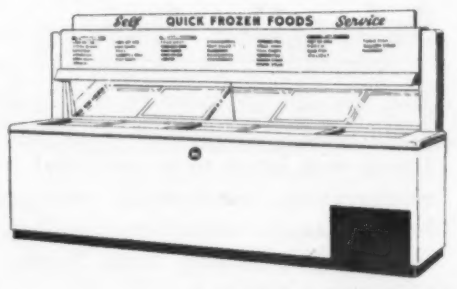
Compressor, ⅓ hp.



Model DC-23-2
Capacity 23 cu. ft.
Floor space 28" x 121"
Over-all Height 66"
Motor, 110-220 V.
Compressor, ½ hp.

THE BREWER-TITCHENER CORPORATION
BINGHAMTON, N. Y.

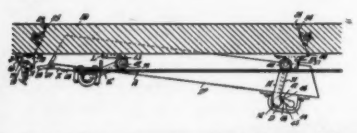
PATENTS

Weeks of Nov. 16 & 23

2,453,703. LOUVER MEANS FOR CONTROLLING AIR FLOW IN REFRIGERATORS. Caesar P. De Carlo, Sr., Ceiba, P. R. Application July 31, 1945, Serial No. 608,076. 5 Claims. (Cl. 62—89.)

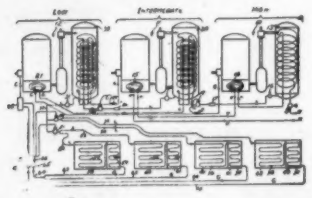
1. A refrigerator comprising a cabinet including a main door opening and a main door therefor affording access to the interior of the cabinet as a whole, and at least one shelf dividing said interior into compartment above and below the shelf, said shelf comprising horizontally pivoted louvers supported across the interior of the cabinet, means connecting all of the louvers for pivotal movement together toward and away from closed position in which the louvers define a substantially imperforate partition across the interior of the cabinet reaching to said main door opening, operating means for urging the louvers toward closed position, and a compartment door hinged on the cabinet in said main door opening in a position to operatively engage said operating means as the compartment door is moved from open toward closed position whereby the louvers of the shelf are opened as the compartment door reaches its closed position.

2,453,793. REFRIGERATOR CAR DOOR. John J. Hveem, Maywood, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware. Application Sept. 3, 1943, Serial No. 501,057. 2 Claims. (Cl. 20—23.)



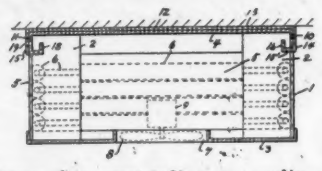
2. In a door construction for refrigerator cars having a wall member provided with a door opening, the combination with a sliding door movable laterally to close said opening; of a guide track on the car extending lengthwise of the same; a rotary crank member supporting the door at the leading end thereof, said crank member being slidably connected to said track; releasable latch means frictionally held in latching engagement by the weight of said door for holding said crank member against accidental rotation, when the door is disposed outwardly of the door opening parallel to said wall; and means actuated by sliding closing movement of the door for forcibly swinging said crank member to release said latch means and actuate the crank member to move the door laterally into said door opening.

2,453,823. MULTIPLE STAGE REFRIGERATION. Burdell S. Williams, Oakwood, Ohio, assignor to Chrysler Corp., Highland Park, Mich., a corporation of Delaware. Application March 21, 1946, Serial No. 656,009. 2 Claims. (Cl. 62—115.)



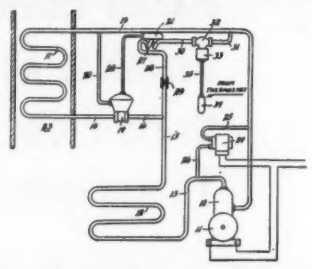
1. The method of achieving abnormally low temperatures through the use of a plurality of mechanical condensing units requiring lubrication, comprising passing a gaseous refrigerant through a high stage cycle, employing water to condense the high stage refrigerant and to cool the lubricant of at least one condensing unit, employing the high stage refrigerant to condense the refrigerant of a succeeding condensing unit and to cool the lubricant of a final low stage condensing unit, passing a second volume of gaseous refrigerant through an intermediate refrigeration cycle, employing the intermediate cycle refrigerant to condense the refrigerant of the low stage condensing unit, and employing a third volume of gaseous refrigerant in the final low stage refrigeration cycle.

2,454,012. SUSPENSION MEANS FOR COOLING UNITS. Edward Oneal Sears, Oakland, Calif., assignor to Colvin-Templeton, Inc., Oakland, Calif., a corporation of California. Application Jan. 12, 1945, Serial No. 572,544. 6 Claims. (Cl. 248—311.)



Means for suspending a cooling unit from a ceiling comprising a member adapted for securing to the ceiling and having a pair of downwardly projecting flanges, with a ledge on one of the flanges, and a pair of vertical rails on the cooling unit spaced to fit between the flanges in face-to-face relation therewith, whereby the cooling unit may be raised in tilted position for engagement of one of the rails over the ledge and may then be swung into horizontal position for bringing both rails into face-to-face relation with the flanges.

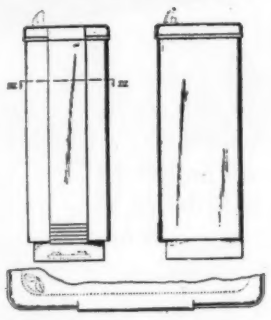
2,454,263. REFRIGERATION SYSTEM. Alwin B. Newton, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., a corporation of Delaware. Application April 5, 1943, Serial No. 481,795. 17 Claims. (Cl. 62—8.)



1. In a refrigeration system having an evaporator, in combination, an expansion valve in control of the flow of refrigerant to the evaporator and including a thermostatic element responsive to the temperature of the refrigerant leaving the evaporator, an auxiliary evaporator associated with the thermostatic element of the expansion valve for cooling the same to vary the superheat maintained at the outlet of said evaporator by the expansion valve, conduit means for supplying refrigerant to said auxiliary evaporator from the main system from a point upstream of the main evaporator, restrictor means in said conduit means, and means including a valve arranged to prevent or establish the discharge of refrigerant for the auxiliary evaporator.

DESIGNS

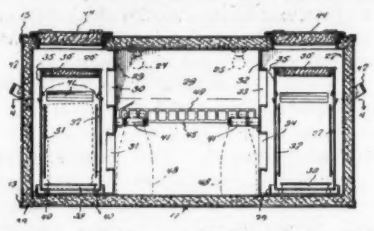
151,800. DESIGN FOR A DRINKING FOUNTAIN OR SIMILAR ARTICLE. Robert H. Tull, Springfield, Mass., assignor to Westinghouse Electrice Corp., a corporation of Pennsylvania. Application Nov. 30, 1946, Serial No. 135,194. Term of patent 14 years. (Cl. D67—4.)



The ornamental design for a drinking fountain or similar article, substantially as shown and described.

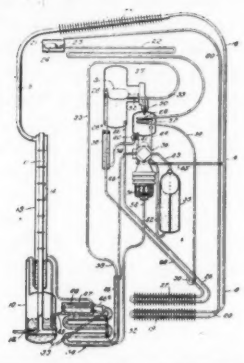
2,454,303. PORTABLE REFRIGERATOR. Morris Brodheim, Philadelphia, Pa. Application Dec. 4, 1945, Serial No. 632,693. 2 Claims. (Cl. 62—31.)

1. A portable ice refrigerator, comprising a substantially rectangular housing of heat insulating material, an upper longitudinal portion of said housing being inclined to define a sloping longitudinal surface, a first transverse partition wall positioned within said housing contiguous to and spaced from one end of the latter defining with the adjacent wall portions of the said housing a first ice compartment, a second transverse partition wall positioned within said housing contiguous to and spaced from the other end of the latter defining with the adjacent wall portions of said housing a second ice compartment, each partition wall having a circulating opening in its upper portion and another opening in its lower portion, said partition walls and the intermediate wall portions of said



housing defining a food storage space between them, an ice receptacle positioned in each ice compartment, means for supporting each ice receptacle in substantially spaced relation to the wall surfaces of its compartment, and a door for said food compartment, said door being located in a vertical longitudinal wall of the housing and being aligned with and substantially the same length as said food compartment.

2,454,344. ABSORPTION REFRIGERATION SYSTEM. Joseph N. Roth, Belding, Mich., assignor, by mesne assignments, to Montcalm, Inc., Greensville, Mich., a corporation of Michigan. Application Aug. 21, 1944, Serial No. 550,402. 8 Claims. (Cl. 62—5.)

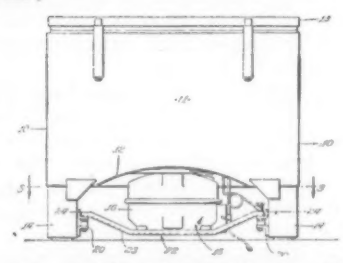


1. In an absorption refrigeration system having a still adapted to have refrigerant vapor boiled out of liquid therein, a condenser, an evaporator, an absorber, and operative connections therebetween, these connections including liquid flow circuit connections between the still and the absorber, one of these latter circuit connections including a movable element for controlling the flow of fluid therethrough, control apparatus including; actuating means for moving said movable element, this means having a temperature responsive portion; means providing a first flow path for refrigerant vapor leaving the still this path being in heat exchange relation with said temperature responsive portion and coinciding in part with the path of flow of liquid returning from the absorber to the still; and means providing a second flow path for refrigerant vapor leaving the still, the construction and arrangement being such that vapor flows through said second path only when vapor flow through said first path is blocked by liquid returning to the still.

2,454,552. TEMPERATURE RESPONSIVE DEVICE. Richard W. Cobean Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application April 8, 1944, Serial No. 530,209. 2 Claims. (Cl. 297—16.)

1. In a temperature responsive device, a bi-metallic strip thermostat wound substantially edgewise into a helix with said strip extending radially at an angle with the axis of said helix of greater than 45 degrees but at least a few degrees less than 90 degrees so that said strip twists in response to changes in temperature and thereby coils and uncoils in accordance with a non-linear function of such changes in temperature.

2,454,727. REFRIGERATING APPARATUS. Isaac M. Wherry, Evansville, Ind., assignor to International Harvester Co., a corporation of New Jersey. Application 4, 1947, Serial No. 739,431. 3 Claims. (Cl. 62—116.)



1. In a refrigerating unit, the combination of: a cabinet having end and side walls and a bottom; means including a base having spaced apart end elements, disposed vertically, arranged to support the cabinet with its bottom spaced above the floor, the bottom and the end elements defining a machinery space open at at least one side; bracket means carried by the end elements within the machinery space; a supporting frame associated with the brackets and of such size as to be confinable within the machinery space; refrigerant-liquefying means carried by the frame, also of such size as to be confinable within the machinery space; and means including slotted connections mounting the frame on the bracket means for limited horizontal sliding movement of the frame with respect to the cabinet through the aforesaid open side of the machinery space from a first position, in which the frame and refrigerant-liquefying means are confined within the machinery space, to a second and operative position, in which at least part of the refrigerant-liquefying means extends outside of the machinery space horizontally beyond the proximate side wall of the cabinet.

(To Be Continued)

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WANTED ENGINEER. Old and well established distributor contractor handling nationally known and well advertised equipment, within an hour from New York City, wants a thoroughly experienced air conditioning and refrigeration sales engineer. Must supervise sales force and be capable of handling all sizes of air conditioning and refrigeration up to 50 tons. Salary and override on volume business. Permanent position to man of proven ability. Opportunity to invest in business. Applications will not be considered unless showing fifteen to twenty years field experience. BOX 3087, Air Conditioning & Refrigeration News.

SALES ENGINEER—central Florida distributor, for top flight line of air conditioning, refrigeration, and heating, requires man of proven selling ability. Your reply should include references. BOX 3092, Air Conditioning & Refrigeration News.

MANUFACTURER'S AGENT — familiar with frozen food and dairy products display cabinets, with established dealer clientele in New York, New Jersey, Pennsylvania, Maryland, and Delaware. We have high consumer acceptance. Dealers enthusiastic, productive. Agent should have kindred but not competitive line. Replies must contain full past and present information. BOX 3093, Air Conditioning & Refrigeration News.

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SPECIAL CLOSE-OUT on brand new freezer plates, coils, and units. Yoder plates—19" x 31" @ $3.75; 21" x 72" @ $7.00. Dole plates—22½" x 33" @ $4.25; 24" x 79" @ $8.00; 22" x 61" @ $6.00; 22" x 72" @ $7.00. (All plates have ½" male or female end connections.) Bush finned coils 76" x 16" x 2¼" 6 tube single row @ $9.00. Chrysler Airtemp air cooled units—¼ H.P. @ $54; ⅓ H.P. @ $66, ½ H.P. @ $102; 1½ H.P. @ $168. Send deposits with orders to GENERAL REFRIGERATORS CORP., 678 Broadway, New York 12, N. Y.

NEW BEAM scales, $22.50; ten or more, 1,000 LBS. ALUMINUM tubing ½" O.D. x .28" wall thickness 3 SO @ 40¢ per lb.; 100 gal. Thermal Mastic #248 in 5 & 10 gal. drums @ $2.00 per gal.; 4,000 Tarrow #B4868 gasket in 7½' lengths @ 1¢ per ft.; 1,500 flare to flare ½" connectors @ 6¢; 1,500 ¼" flare to flare connectors @ 5¢. MIDWEST INDUSTRIES, 835 Osage Ave., Kansas City, Kansas.

SUBJECT TO prior sale: Hermetic Chieftain units—⅛ H. P., $44.50; ⅙ H. P., $48.50 Other well known hermetics: ⅛ H. P., fan cooled, $52.50; ¼ H. P., fan cooled, light duty, $57.50; ¼ H. P., fan cooled, heavy duty, $59.50; ⅓ H. P., fan cooled, $69.50. Open units, standard makes: ¼ H. P., $54.50; ⅓ H. P., $64.50; ½ H. P., $84.50. Above prices quoted on lots of six. All open units are 60 cycle, single phase. All above units new, carrying factory warranty. Write for unit list. Penn type 260 Apol low pressure control, $4.25. Penn type 262 Apol high pressure control, $4.25. Minneapolis-Honeywell dual pressure control, $4.50. Detroit Lubricator low pressure control, $4.25. G. E. blower fan motor with 10" fan, $4.50. Superior heat exchanger, 13" over-all, ⅜" x ⅝", $4.25. Mueller heat exchanger, 14½" over-all, ⅜" x ⅝", $5.00. Kramer Trenton panel blower complete, ½ ton, $30.00. Superior master drier ¼" flare x 1¼" x 5½", 75¢. U. S. "Freon" gauge, 4½" face, 30" vac., 150# or 300#, with corresponding temp. scale with red warning hand and mounting holes, $4.50. Scientific Instrument Co. dial thermometer, 4½" face, minus 40 to plus 120, 5 ft. tube, $4.50. 1 set U. S. "Freon" gauge, 2½" face, 100# compound and 300# pressure, temp. scale, recal. and mounting holes, $3.50 Ranco type KW-412 cold control complete, $4.00. American Injector oil separator, ¼ ton, $3.50. Cold plates 1—30" x 55", 2—30" x 64", 3 to a set, $35.00. 6—5 lb. cans Davision refrigeration silica gel, $6.00. 1—5 lb. can Davison refrigeration silica gel, $1.10. Crouse-Hinds vapor proof refrigerator light, with guard, $2.50. WALTER W. STARR, 1207 George Street, Chicago 13, Illinois.

FRANCHISES WANTED

MANUFACTURER'S REPRESENTATIVE with established clientele in New York, New Jersey and Pennsylvania, interested in representing quality line of commercial refrigeration, air conditioning, electric water coolers, and allied products. Have own display room and offices in northern New Jersey. Years of experience and know-how in handling dealers and distributors. Financially responsible. BOX 3022, Air Conditioning & Refrigeration News.

BUSINESS OPPORTUNITIES

WANT MORE customers? Advertising thermometers, prominently displaying your firm name and telephone number, properly distributed, positively will increase your commercial customers. Cost only $25 per 100. $5 deposit with order required. Print name, address and phone. THERMOMETER ADVERTISING CO., P. O. Box 112, San Francisco 1, Calif.

MIAMI, FLORIDA—a leading refrigeration, air conditioning, television, and appliance sales and service establishment—in same Miami location ten years. Grossed $150,000 and netted $20,000 last year. Will sell for $7,500 to cover truck, equipment, and improvements plus merchandise inventory at cost—about $8,000. BOX 2992, Air Conditioning & Refrigeration News.

ESTABLISHED WHOLESALE business, Rocky Mtn. region. Inventory at present cost estimated $60,000.00. Large amount of business guaranteed. Reason for selling—going into cooperative interests. Building lease up to 5 years @ $175.00 per month. Practically a guaranteed opportunity for person with experience in wholesale refrigeration equipment business. BOX 3094, Air Conditioning & Refrigeration News.

MOST COMPLETE shop in San Joaquin Valley. Complete low pressure, air conditioning and heating facilities. 1,000 sq. ft. warehouse, 3,200 ft. new office, display and workshop building, 4,000 ft. steel fenced yard. Leading franchise two counties. House and cabin. 3 trucks, portable welder, tools and equipment. All $45,000.00. BOX 3096, Air Conditioning & Refrigeration News.

MISCELLANEOUS

NON-REFRIGERATED MODULE supermarket fixtures, complete line. District men—give your refrigeration dealers and chain operators a complete store engineering service with a quality line of module engineered fixtures. Factory trained store planning and installation service available exclusively to you and your customers. Our salesmen are informed of this advertisement. Reply BOX 3068, Air Conditioning & Refrigeration News.

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West Coast Wholesaler since 1928
3109 Beverly Blvd., Los Angeles 4, EX. 3111

Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Motor Trouble (6)

The refrigeration service engineer will not find it profitable to attempt to do much in the way of motor repair out on the job. He can clean motors, see that they are properly oiled, replace capacitors on capacitor-start motors (some capacitor-start motors also have a capacitor in with the running winding and are therefore called capacitor-start capacitor-run motors), repair or replace the starting switch, and see that the rotors have the proper end-play.

On motors having commutators, such as direct-current motors and repulsion-induction motors, he can clean the commutator with a piece of about double aught sandpaper (never emery cloth) held on the commutator while the motor is running.

If the commutator is rough or ridged, or the mica between the bars of the commutator sticks up above the bars, he will usually find it best to replace the motor and take it into the shop where the armature can be taken out, set up in a lathe, and the commutator turned smooth and the mica undercut (scraped out of the slots between the bars so that it does not come up as high as the bars).

MOTOR REPAIRS ON THE JOB

The service engineer can replace the brushes on the job if they are too short to make good contact with the commutator. He should be sure that he replaces them with brushes that fit properly in the brushholders so that they are free to move up and down, and he should also be sure that the new brushes are the same grade as the old ones—neither too hard nor too soft.

New brushes should be "ground in" by holding a strip of double aught sandpaper on the commutator between the commutator and the new brush with the sand side of the paper toward the brush and then rocking the commutator back and forth until the end of the brush is ground to exactly fit the commutator.

The springs should be examined for tension; if they have become weak, due to heat from the commutator, they should be replaced. The rocker-arm or brushholder should be checked to be sure that it is in the right position. On repulsion-induction motors this point is usually marked on the end-bell and it is not often advisable to change this unless a new armature is put in the motor, when it may be necessary to adjust it a little.

This operating position was determined by a factory test with instruments and is the point where the best results are obtained with the least amount of sparking at the brushes.

Sparking at the commutator may be caused by an incorrect position of the brushes on the commutator or by such other things as incorrect grade of brushes; worn brushes; weak brush springs; rough, dirty, or oily commutator; high mica; excessive load; voltage too low or too high; loose connection in the armature or the field circuits or a coil burned out; or governor mechanism dirty or sticking.

Some of these things may be corrected out on the job. On large installations, especially those at some distance from the shop, it may be expedient to do more work in the field on a motor than on a small nearby job, or one for which the service engineer has a replacement motor in his service truck.

MOTOR REPAIRS IN THE SHOP

However, except for minor troubles, it is usually better as above suggested, for the service engineer to exchange the motor and take the old one into his shop, where it can be repaired at more leisure or without tying up a truck. Moreover, there are better facilities in the way of tools, instruments, and test set-ups to make the repair more quickly, do a better job, and test it for better and more dependable performance.

If the service engineer has a fairly well equipped shop he can do minor overhauling of motors that include replacing bearings and making other mechanical repairs, but there are very few shops that should attempt rewinding work. This requires special knowledge and access to a good many reference books not usually included in the shop's library.

Of greater importance is the fact that rewinding requires equipment that not many refrigeration shops can afford to invest in because of the comparatively few motors that come in that will need rewinding.

In almost every community or nearby, there is at least one capable and well equipped motor repair shop. In the great majority of cases, the refrigeration service engineer will find it cheaper in the long run and more effective to have a regular motor repair shop do his major overhauling and rewinding of motors, rather than to take the time to do it himself unless he has had a good deal of experience in that work and has a lot of spare time.

Even replacing bearings is not to be too lightly attempted, for they must be "line-reamed," that is, the two bearings must be reamed or bored to exactly the right size and at the same time in exact line with one another. Not only must the bearings be in line with one another, but they must be accurately centered so that the rotor is exactly in the center between the stator pole-pieces. The gap must be the same all around, or the motor will run hot and with excessive "hum."

METALLIZING DAMAGED SHAFTS

In this connection it may be well to call attention to the fact that many times it pays to have a cut or scored shaft "metallized" instead of buying a new shaft. This consists in spraying molten steel on the shaft and thus building it up oversize. Then it is put in a lathe or external grinder and ground down.

This saves a good deal of time, and especially on the larger motors, a good deal of money, for not only does it avoid buying a new shaft, but the shaft does not have to be removed from the armature or rotor.

The rotor must have enough end-play to enable it to freely seek its proper magnetic position, but once this is determined, very little end-play can be permitted. The amount of maximum end-play varies with the size, make, and type of motor, but for most fractional horsepower motors, five or six thousandths is enough. End-play is adjusted by the use of small washers, usually of fiber.

Repulsion-start induction motors usually have some sort of mechanism that short circuits the commutator when the motor gets up to about three-fourths full-load speed, and converts the wound, repulsion-type armature to, in effect, a squirrel cage motor.

If this mechanism sticks, or is dirty and does not make good contact with the armature, the motor may get up to the speed at which it will attempt to throw the brushes and/or short circuit the commutator, but will be unable to maintain that speed, nor get on up to full-load speed. This will be indicated by sparking at the short-circuiting mechanism. Overloads may also cause this.

Short-circuited stator coils may generally be found by their getting hotter than the other coils. Also a shorted stator coil causes an increase in the motor "hum." Moreover, the motor will tend to run hot, and with less than normal power.

CORRECTION

Is my face red! Several readers, of whom Ray Neal of Hamilton, Ohio, was first, have called to my attention an inaccuracy in the Jan. 3 issue.

At the bottom of the first column it was stated, "Voltage drop goes up as the *square* of the current." Of course it doesn't do any such thing! Voltage drop just goes up in the same proportion as the current. It follows Ohm's Law of E=IR, as any beginner knows.

Instead of voltage drop, I must have been thinking of the *power loss* in the line due to increase in load. If the load in amperes, out on the end of the line doubles, then power loss in the line (that is lost as heat) is four times as great as before. But the voltage drop just doubles, the same as the current.

To really complete my boner, I repeated it along toward the bottom of the second paragraph! There can be no valid excuse. Probably due to doing it hurriedly.

Sorry—Hope everyone who read the Jan. 3 "Refrigeration Problems" reads this.

PAUL REED

P.S. Just noticed that toward the bottom of column two of the Jan. 17 issue, I said that a thermometer puttied to a motor showed a "higher" temperature than the temperature inside the motor. Should have been "lower" instead of "higher."

'Thermo-Memo' Wins $50 Award as Title

CHICAGO — For suggesting the name "Thermo-Memo" as an appropriate title for the four-page publication put out by Chase Refrigeration Supply Co. here, A. T. Smith of Refrigeration & Equipment Co., Little Rock, Ark., was recently awarded $50 by the wholesaling firm.

Chase had sponsored a contest last December to choose a name for its monthly news sheet. Smith's was the winning entry.

All-State Welding Alloys Co. Completes New Headquarters

NEW YORK CITY—Bent Laune, president of All-State Welding Alloys Co., Inc., has announced completion of his company's new headquarters building located at 273 Ferris Ave., White Plains, N. Y. The company was to occupy the quarters on Jan. 3.

Union Electric To Sell, Service Appliances In Casper, Wyo.

CASPER, Wyo.— Union Electric Co. of this city has taken out a Wyoming charter to sell and service electrical appliances, with $50,000 capital stock divided into 500 shares of common stock at a par value of $100 each.

Principal offices will be 146 S. Durbin St., and directors elected for the company's first year are M. Marvel, J. F. Mahoney, and Edward E. Murane.

Robertshaw-Fulton Sales At $33 Million In '48

BOSTON—Robertshaw-Fulton Controls Co., maker of temperature controls for ranges and water heaters, chalked up total sales valued at $33,000,000 in 1948 and net earnings of about $3,000,000, T. T. Arden, executive vice president, announced here recently.

This compared with sales of $29,554,030 and net earnings of $2,196,610 in 1947, he said.

Arden, forecasting a slower demand for electric and gas ranges this year, anticipates that sales will drop to around $30,000,000 during 1949.

Earl G. Morgan Joins Superior Supply Co.

KANSAS CITY, Mo.—Earl G. Morgan, a registered professional engineer in the state of Missouri, has joined the Superior Refrigeration Supply Co. here, Paul Shapiro of the wholesaling firm has announced.

Morgan is a member of both the American Society of Refrigerating Engineers and the American Society of Heating and Ventilating Engineers.

Allen Co. Names Manthey

ST. PAUL, Minn.—Phil K. Manthey has been appointed sales manager of the appliance division of the Robert Allen Co., here according to A. F. Ruvelson, general manager.

Electrimatic
Valves, Driers, Strainers, Charging Lines, Quick Couplers, Forged Flare Nuts and Fittings
Ask Your Wholesaler
Electrimatic
2100 Indiana Ave. • Chicago 16, Illinois
Canada—2025 Addington Ave., Montreal

Acme
FREON OIL SEPARATORS
Double filter for double efficiency. Maximum separation of oil from refrigerant vapor. Six models meet all requirements for installations from ¼ HP up to 10 HP. All installations can be serviced at moderate cost. Underwriters laboratories approval seal on each model.
ACME PRODUCTS
ACME INDUSTRIES, INC.
Jackson, Michigan
Representatives in all principal cities

FAST EASY WAY TO KEEP STOCKS COMPLETE
Order From Our Great New Value-Filled
CATALOG
Your best source for all Refrigeration, Air Conditioning, Heating Parts and Supplies. Write on your letterhead for copy. Orders filled same day received.
THE SUPPLY HOUSE THAT SERVICE BUILT • Wholesale Only
SERVICE SP PARTS CO.
2511-2611 LAKE STREET MELROSE PARK, ILLINOIS

A NEW Line of
SUPERIOR DRIERS
The DRIERS with the Plus Features
★ MODERN DESIGN
★ EFFICIENT OPERATION
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★ ALL BRASS CONSTRUCTION

For complete details and specifications on the New Driers and other Superior products, ask your Wholesaler for a copy of our NEW Catalog R3.
(or a copy may be obtained by writing to us)
160
Superior Valve and Fittings Co.
1509 WEST LIBERTY AVE., PITTSBURGH 26, PENNA.
OFFICES IN PRINCIPAL CITIES · STOCKS: CHICAGO (6) · LOS ANGELES (15) · JOBBERS EVERYWHERE

SELL Victor
For
DISPLAY CABINETS
QUICKFREEZERS
BEVERAGE COOLERS
MILK COOLERS
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write
VICTOR PRODUCTS CORP.
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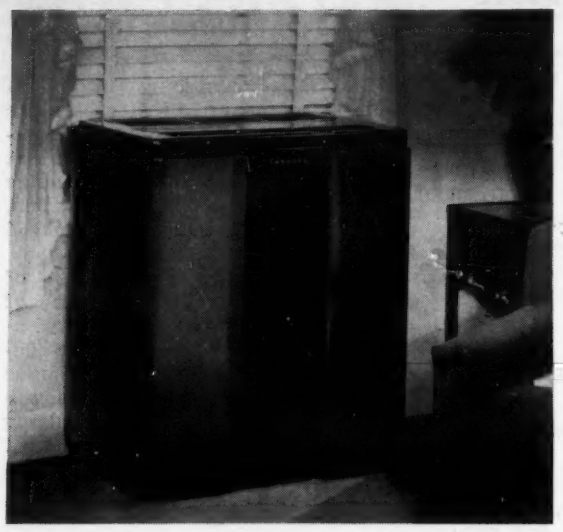
Carrier Console Has Special Exhaust Control



Newest unit in the Carrier line of air conditioners is the deluxe console model 51H2. A 1-hp. unit, it has an all-metal cabinet, finished in two-tone brown.

'49 Carrier Line--

(Concluded from Page 1, Column 2)

model include a special exhaust control for the quick removal of stale air and smoke, and a two-speed fan for draftless air distribution. Carrier engineers have designed this model for extreme quietness.

The hermetically sealed refrigerating compressor starts unloaded, thus requiring lower starting current.

Simplified, clearly-marked controls make the unit easy to operate. Concealed behind a decorative, hinged cover on the front of the cabinet, the control panel consists of two knobs. The left knob is a switch which turns on the fan only, or the complete air conditioning system. The right knob is a selector which controls fan operation at high or low speed for ventilation, or can be turned to reverse fan rotation to exhaust smoke or other room odors to the outside. Space is provided in the center of the panel for a thermostatic control knob for automatic operation. This is an accessory which may be installed at time of purchase or any time later.

The standard model operates on 230 or 208-volt, single-phase, 60-cycle current. Special models are available for operation on 115-volt direct current.

The five-year warranty plan provides one year's full guarantee, plus a four-year replacement warranty on the refrigeration unit.

Cabinet dimensions are 40 in. high, 34 in. wide, and 21 in. deep. The cabinet is of all-steel construction. The outlet grille on the top of the cabinet permits deflection of air supply as desired.

27,589 Freezers Sold In November

Electric Farm and Home Freezers—Complete—Sales by Sizes—Units

NOVEMBER (33 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under	2,033	....	16	2,049
2. 5.0 to 6.9 cu. ft.	3,120	....	59	3,179
3. 7.0 to 8.9 cu. ft.	9,401	....	34	9,435
4. 9.0 to 10.9 cu. ft.	1,942	....	2	1,944
5. 11.0 to 12.9 cu. ft.	1,200	....	....	1,200
6. 13.0 to 16.9 cu. ft.	6,190	....	6	6,196
7. 17.0 to 20.9 cu. ft.	2,873	....	6	2,879
8. 21.0 to 29.9 cu. ft.	185	....	....	185
9. 30.0 to 39.9 cu. ft.	511	....	....	511
10. 40.0 to 49.9 cu. ft.	1	....	....	1
11. 50.0 to 59.9 cu. ft.	....	....	....	....
12. 60.0 cu. ft. and over	10	....	....	10
Total	27,466	....	123	27,589

FIRST 11 MONTHS (33-36 Companies)

Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1. 4.9 cu. ft. and under	61,699	2	902	62,603
2. 5.0 to 6.9 cu. ft.	68,299	....	868	69,167
3. 7.0 to 8.9 cu. ft.	113,244	....	1,315	114,559
4. 9.0 to 10.9 cu. ft.	36,889	....	117	37,006
5. 11.0 to 12.9 cu. ft.	64,644	4	332	64,980
6. 13.0 to 16.9 cu. ft.	37,688	....	88	37,776
7. 17.0 to 20.9 cu. ft.	36,645	....	34	36,679
8. 21.0 to 29.9 cu. ft.	2,375	....	3	2,378
9. 30.0 to 39.9 cu. ft.	4,409	....	....	4,409
10. 40.0 to 49.9 cu. ft.	34	....	....	34
11. 50.0 to 59.9 cu. ft.	....	....	....	....
12. 60.0 cu. ft. and over	112	....	....	112
Total	426,038	6	3,659	429,703

Participating companies: Ace Cabinet Corp.; August G. Barkow Mfg. Co.; Beatty Mfg. Co.; Ben-Hur Mfg. Co.; R. H. Bishop Co.; Brewer-Titchener Corp.; Carrier Corp.; Chapman Refrigerator Sales Co.; The Coolerator Co.; The Crosley Div., Avco Mfg. Corp.; Deepfreeze Div., Motor Products Corp.; Frigidaire Div., General Motors Corp.; General Electric Co.; General Refrigerator Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Masterfreez Home Locker Mfg. Co.; The Maytag Co.; Nash-Kelvinator Corp.; Norge Div., Borg-Warner Corp.; Oregon Refrigerator Co.; Portable Elevator Co.; Revco, Inc.; Sanitary Refrigerator Co.; Schaefer, Inc.; Seeger Refrigerator Co.; Emil Steinhorst & Sons, Inc.; Stoddard Mfg. Co.; Sub-Zero Freezer Co., Inc.; Victor Products Corp. (In 6-1-48); Whiting Corp. (In 3-1-48); Wilson Cabinet Co., Inc.; Ideal Cooler Co. (Out 7-1-48); Midwest Industries, Inc. (Out 10-1-48); Quillen Bros. Ref. Co. (Out 7-1-48); Refrigeration Corp. of America Div., Noma Electric Corp. (Out 4-1-48).

CORK INSULATION DISTRIBUTORS WANTED

Low priced, highest quality cork insulation, steam-baked meeting standard commercial specifications.

Exclusive Distributorships open for many territories WRITE for details to *"Salesmanager."*

RECTOR MINERAL TRADING Corporation

16 East 43rd Street New York 17, N. Y.

Freez-King Freezer--

(Concluded from Page 1, Column 3)

smaller model can produce 15 gals. per hour, the larger one 30 gals.

Freez-King's own model 300-49 will produce more than 40 gals. of mix per 10-hour day, in fully automatic, continuous operation. It is a portable model, and has a number of features to make it easy to use.

Leo S. Maranz, president of Freez-King Corp., and a veteran of 23 years in designing and selling ice cream freezers, has announced completion of a top executive lineup for the company comprised of men with many years' experience in the field.

A. E. "Al" Wilson, director of sales, was for 18 years general sales manager of the Freezer Div. of Mills Industries.

Larry H. Ounsworth will be vice president in charge of national accounts and sales promotion. He was for some time with Taylor Freezer Corp. in charge of national chain accounts, and has installed freezers all over the world.

Walter C. Graves, named director of sales for the eastern division of Freez-King, was assistant general manager of Mills for 14 years.

110 Georgia Farm Women Buy 120 Major Appliances

HAMILTON, Ga.—A total of 110 farm women in Harris County installed 120 new major electrical appliances in their kitchens last year, Mrs. Clyde C. Sprayberry, home demonstration agent here, has reported.

Stacey Installed as ASHVE Head

A. E. Stacey, Jr. (left), incoming president of the American Society of Heating & Ventilating Engineers, accepts the president's gavel from G. L. Tuve, retiring president, at the close of the society's annual convention in Chicago.

Dealers Like Reg. W--

(Concluded from Page 1, Column 4)

months to pay. Most popular terms with the "abolishers" are 10% down with 24 months to pay.

A retailer in Florida who prefers 18 months to pay with 20% down stated:

"Regulation W is an anti-inflation bill only. It will be automatically canceled whenever the Federal Reserve Bank thinks the danger from inflation is passed. This is likely to be soon."

A Boston dealer in favor of the regulation as it stands asserts:

"The independent dealer now has the same opportunity to go after business as the public utilities, chain stores, department stores, or 'borax' furniture stores."

Retailers in favor of abolishing the credit regulation declare that governmental control is going too far in regulating business credit.

Builder's Show--

(Concluded from Page 1, Column 5)

kit of 77 appliances, cabinets, and kitchen furnishings scaled 1 in. to the foot.

The new 1949 Parsons "Pureaire" kitchen will make its first public appearance. This all-in-one unit includes a 5½-cu. ft. refrigerator, electric range unit, and sink.

Food waste dispensers will be shown by a number of firms. Among the types shown will be the "In-Sink-Erator" made by In-Sink-Erator Mfg. Co., featuring a reversing action; and the "Waste King Pulverator" which Given Mfg. Co. claims is the smallest unit made.

Other appliances to be shown include the Jackson dishwasher, Bendix home laundry equipment, and Hamilton clothes dryers.

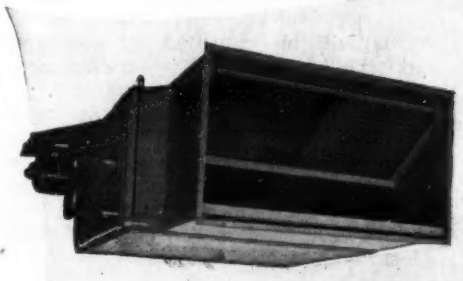
American Central Mfg. Co. will have "The American Kitchens Little Theater," an animated display.

BUSH HEAT TRANSFER PRODUCTS

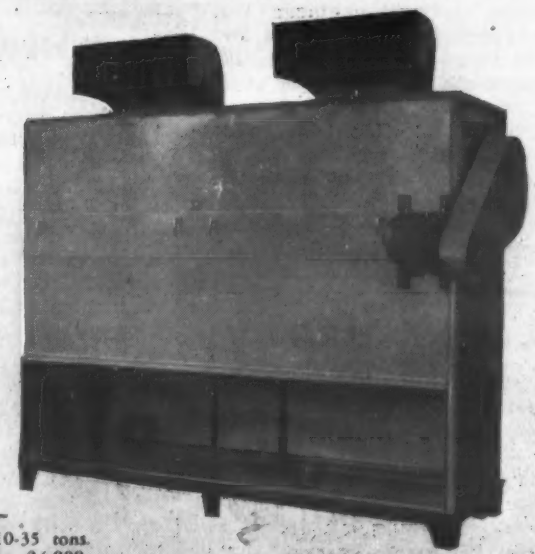
The "STOCK UNIT" answer to every need!

BUSH WATER, STEAM AND DX COILS are supplied in standardized and matched sizes and singly or in combination can be arranged to fit practically any installation. Top materials. Conservatively rated.

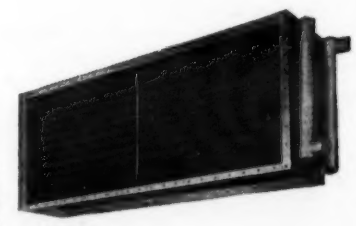
BUSH HEAVY DUTY COOLERS, floor and ceiling type, are designed for easy installation and service . . . fill practically every refrigeration or air conditioning need. Expert engineering and workmanship.



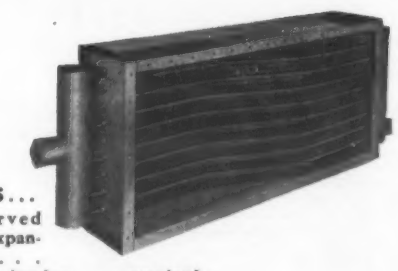
CEILING TYPE UNIT — Air Conditioning: 5-25 tons. Product Cooling: 24,000-48,000 BTU/HR at 10° TD above 32°. The last word in efficient design and operation.



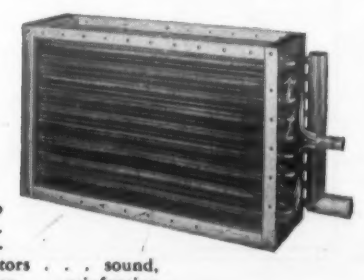
FLOOR TYPE UNIT — Air conditioning: 10-35 tons. Product Cooling: 24,000-96,000 BTU/HR at 10° TD above 32°. 24,000-90,000 BTU/HR at 10° TD below 32°. Built in two sections for quick, easy installation.



WATER COILS . . . Aluminum fins on tinned copper tubes . . . mechanically expanded fin-to-tube bond . . . turbulence-creating finger spacers.



STEAM COILS . . . O-GEE curved tubes for expansion stresses . . . large tubular headers . . . standard BUSH materials and workmanship.



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